# HINDU-MUSLIM INTERGROUP RELATIONS IN BANGLADESH: A COGNITIVE-INTERGROUP ANALYSIS

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## ABSTRACT

Six real-life studies investigated three domains of intergroup relations: intergroup contact, crossed-categorization and intergroup attribution in the context of Hindu-Muslim minority-majority intergroup relations in Bangladesh.

An elaborated version of the "contact hypothesis" in a minority(Hindu) - majority(Muslim) context was tested in one study. In addition to Allport's taxonomy of relevant factors, a number of interpersonal-intergroup aspects of contact were included to investigate how these factors were perceived in real-life contact situations. The relationship between dimensions of intergroup contact (amount, role-status aspects and interpersonal-intergroup aspects of contact) and three criterion variables (outgroup attitude, perceived outgroup variability, and intergroup anxiety) was investigated. Multiple regression analyses revealed that dimensions of contact were significant predictors of all three variables, although different dimensions emerged as the best predictors in each case. Predictions were generally better for the minority group who reported higher levels of contact. The specific nature, rather than quantity, of contact was the best predictor of outgroup attitudes. Quantity of contact was the best predictor of perceived outgroup variability. Perception of typicality and awareness of intergroup differences were the best predictors of intergroup anxiety, which itself was negatively associated with outgroup attitudes and perceived outgroup variability. The results

illustrate the need for multiple criterion variables in research on the contact hypothesis.

Two studies explored the impact of crossed categorization on intergroup relations, perceived group variability and self-esteem. The first study in this series tested the psychological strength of religious and national identity. The second study also investigated the strength of linguistic identity in addition to the other two categorization dimensions. Both groups showed a dominant ingroup favouritism response where religious identity was shared and an outgroup derogatory response where religious identity was not shared. The results illustrate that crossing different psychologically unequal categories may not bring any positive effects in intergroup relations. Crossed categorization had little impact on perceived group variability, but there was an ingroup homogeneity effect for members of the Hindu minority group. Personal and collective self-esteem were lower in the minority group, but did not vary across different crossed-categorization conditions for either group. The results of both studies tend to support an integration of social identity and category dominance models, with crossed categorization having its impact via the reduced utility of social categorization, rather than increased perceived group variability.

Three studies explored intergroup attributional bias, with a focus on three limitations of previous research: the measurement of intergroup attributions, their affective consequences, and factors

modifying the bias. In the first study of this series, both groups showed ingroup-favouring attributions, but only Muslims were outgroup-derogating. In the second study, in which only a Muslim sample was used, they attributed positive and negative acts by targets who shared (or did not share) category membership on religious or national dimensions. Outgroup-derogation was again replicated, especially for groups who did not share religious identity. In both of these two studies causal dimensions were significant predictors of affects, primarily for both positive and negative outcomes of the ingroup. The link between locus of causality and pride was especially strong. In addition, in the second study, self-esteem scores were found to be strongly associated with internal attributions. However, it was also shown that self-esteem could be raised by "explaining away" outgroup-positive acts. In the third study, in which only a Hindu sample was taken, they attributed positive and negative acts by ingroup and outgroup members, under two order conditions (intergroup evaluations preceded or succeeded attributions). As predicted, bias by members of this minority group was accentuated when social categorizations were made salient.

Overall, these six studies increase our understanding of the determinants and consequences of different aspects of Hindu-Muslim intergroup relations in Bangladesh and highlight several issues which could guide future theoretical developments in social cognition and intergroup relations.

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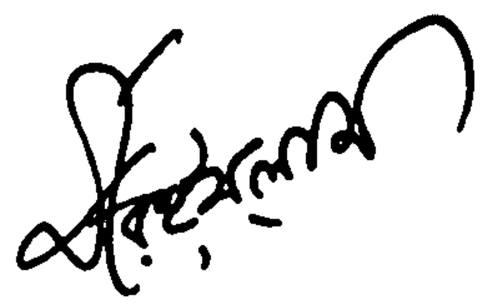
# DECLARATION

**Hindu-Muslim Intergroup Relations in Bangladesh:**
**A Cognitive-Intergroup Analysis**

I hereby certify that this thesis is my own work and has not been submitted for any degree at any other university. All quotations have been distinguished by quotation marks and the sources of information acknowledged.



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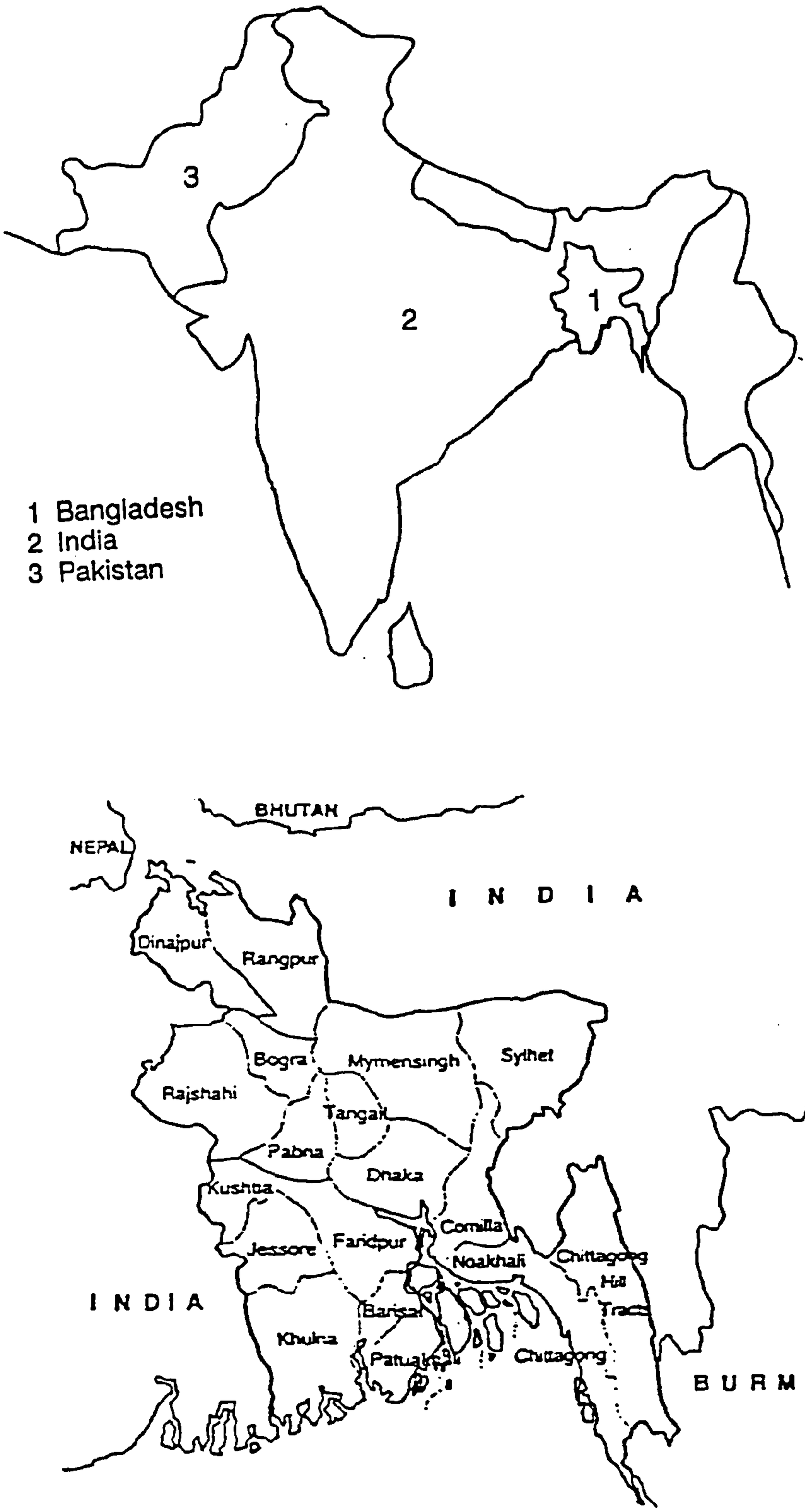


Figure 1.1 Geographical Location of Bangladesh, India and Pakistan.

(Source: J E Schwartzberg ed. A Historical Atlas of South Asia; Chicago, 1978, p. 79).

# CHAPTER 1

## HINDU-MUSLIM INTERGROUP RELATIONS IN BANGLADESH: A HISTORICAL AND SOCIO-POLITICAL OVERVIEW

### 1.1 General Introduction.

Bangladesh is the newest nation in the South Asian sub-continent. The country is located in the delta of the Ganges and Brahmaputra rivers in the northeastern region of the Indian subcontinent. Bangladesh has an area of 55,598 square miles, which is somewhat larger than that of England. The country is virtually surrounded by India, apart from a small common border with Burma in the southeast. The two countries of Bangladesh and India share a 1,500 mile-long border.

The population of Bangladesh which was estimated at about 113 million in 1990, is ethnically heterogeneous. The majority of the country's population are Bengali, an ethnic as well as a linguistic group. The people of Bangladesh practise a variety of religions such as Islam, Hinduism, Buddhism and Christianity, although the country is predominated by a Muslim majority, about 86 percent of total population, making it the second largest Muslim ethnic group in the world. The majority of the Muslim people belong to the Sunni sect. There is, however, a small number of Shia Muslim, mostly descendants of immigrants from Iran. Hindus form a sizable minority, about 12 percent, and are divided into scheduled (low) and non-scheduled castes. Members of the non-scheduled castes constitute about half of all Hindus in Bangladesh. The remaining population is made up primarily of Buddhists, members of non-Bengali tribal groups inhabiting the Hill tracts in South eastern Bangladesh along the Burma border, and discernible in terms of language race and customs. Some of these tribes are racially akin to the people of Burma.

The historic homeland of the Bengali people is in the Bengal region of pre-modern India, which all Bengalis used to refer to as *bangla des* (land of Bengalis - those people whose native language is Bengali), the original Bengal region today covers more than 110,000 square miles, incorporating the Indian state of West-Bengal (54,660 square miles) and the nation of Bangladesh (55,598 square miles). This politico-geographic division corresponds largely to the population majority areas of the two largest religious communities which criss-cross Bengali ethno-linguistic identity: Hindu and Muslim. In India's West-Bengal, Hindu-Muslim proportions are simply reversed; 82 percent are Hindus, 13 percent are Muslim.

It should be noted that Hindu-Muslim relations in Bangladesh are structured differently from those in the Indian subcontinent. It is therefore, necessary at this point to outline briefly the origins of the racial, linguistical and cultural homogeneity of the Bengalis in Bangladesh.

## 1.2 Origins of Bengali Ethnicity and Language.

There is much debate over the origins of the Bengali people and their precise ethnic composition; most researchers have concluded that Bengalis are a mixed race. Three main components have been suggested. The aboriginal inhabitants, sometimes called the Veddes or Bang tribe, whose name still denotes the land, were the earliest groups in this area. According to some ethnologists, they were followed by Aryans who drove the tribal people towards the delta of the Ganges and Brahmaputra. Another group, known as Armenoids (of Indo-European stock) are believed to have entered as well. From the eighth century Muslim traders, rulers and scholars of Arab, Persian and Turkish origin, moved in large numbers to the Indian-subcontinent and gradually in about the thirteenth century to Bengal. However, so extensive is the mixture of ethnic types in Bengal that

there can be little empirical basis for claims of a neat distinction between social or cultural groups based on ethnic criteria. The ethnic division of Hindus and Muslims in Bangladesh is primarily based on religious categorization. There is little archeological evidence supporting different racial roots of these two religious communities in Bangladesh (Kopf, 1969). A large number of research findings, on the other hand, showed that racially homogeneous groups of Bangalis have emerged as two distinct ethnic groups based on religious categorization (Joarder, 1977; Kopf, 1976).

In present Bangladesh and the Indian state of West-Bengal which used to be a single unit during the British rule in India, Bengali is the only common language. Bengali is descended from *Sanskrit*, an Indo-Aryan group of languages in ancient India, through *Gaudiya Prakrit*, a language which emerged during Buddhist rule in eighth to twelfth century in Bengal. From the beginning of the thirteenth century, the language was enriched with the interaction of Arabic, Persian, Portuguese and finally English. However, there are distinct differences to be found between the Bengali spoken by Hindus and Muslims for last two centuries and this difference is still upheld. The language spoken by Muslims bears the marks of Islamic culture, heavily absorbed from Arabic and Persian, and dating from the very beginning of Muslim rule. On the other hand, the language spoken by Hindus is comparatively closer to Sanskrit, and a sharp diversity can be noticed specially in religious vocabulary.

## 1.3 Historical and Socio-political Background of Hindu-Muslim Antagonism in Bengal.

The aboriginal migrants who settled in the delta, and whose descendants constitute the mass of Bengal's population today, became the followers of Hinduism during the consolidation of the Gupta Empire in the fifth century in Bengal. Although eighth to twelfth century Bengal was mostly ruled by Buddhist

rulers, they did very little for the growth of Buddhism. In particular, it is said that Hinduism did not permeate beyond the western part of Bengal proper as the Eastern part always had a self sufficient economy. However, it is assumed that before the Muslim invasion of Bengal, a loose form of both Hinduism and Buddhism prevailed in East Bengal. Although Hindu conquerors made every effort to promote local conversion during their period of rule, they branded the local population ritually inferior and low caste (Mukherjee, 1972). However, the arrival of Turko-Afghan Muslims in Bengal at the beginning of the thirteenth century and the rapid expansion of their rule permanently changed the character and culture of the area.

After Islam became associated with the state power, approximately half of Bengal's low caste local population converted to Islam (Mitra, 1954). At first, the converts found themselves little better off in the so-called egalitarian eyes of the Turko-Afghan elites of Islam. But perhaps the absence of rigid caste system in Islam assured them of social equability, and thus attracted them to convert from their original religion. The majority of the population of East Bengal were converted to the Muslim religion, while the population of the smaller western part remained mostly Hindu. No clear explanation of this differing pattern of conversion has been put forward, although it is clear that rejection of the Hindu religion by the low caste Bengalis was a form of revolt against the oppression and discrimination by the high caste *Brahmin* Hindus, to which they were subjected. There are a considerable number of studies on homogeneity in blood type, sitting height, forehead breadth etc. which tend to support the conviction that most Muslims in East Bengal are more related in origin to the lower caste Namasudras and that genealogies tracing Arab descent are mostly imaginary (Majumder, 1961; Maloney, 1977).

It is well documented that the Islamic conquest incorporated the upper class of learned and landed Hindu castes as the privileged functionaries necessary to mediate Islamic rule with the local population in Bengal (Mukherjee, 1972). An overwhelming majority of the Bengali Muslims were farmers who were barely conscious of the locus of political authority in the country. And even in East Bengal, where there was a Muslim majority, Hindu landlords were regarded as being the holders of power and authority. Although Hindus in Bengal could not forget the Muslim invasion and the fact that Hindus had been deprived of ruling their country since the thirteenth century, they knew that unlike other parts of Muslim ruled India, Bengal was always peaceful and economically dominated by themselves. Bengal was the only part of India where some degree of cultural assimilation could be found and in rural Bengal, both Hindus and Muslims lived in peace, harmony and understanding, each following their own way of life, whilst remaining convinced that both religious groups belonged to the same racial and ethnic stock (see O'Donnell, 1984; Rahim, 1967).

In 1757 the British finally established their power over India and in 1773 Lord Cornwallis imposed a new land tenure system known as the "permanent settlement" in which *zamindar* (appointed agents), who were mostly Hindus, collected land tax levied by the British on tenant farmers in Bengal. These Hindu land lords soon began to educate their children in English education and gained socio-political power over Muslims. In course of time, they formed the elite of East Bengal. On the other hand, Muslims were strongly opposed to giving their children an English education as they were apprehensive that the new education was a device to wean them away from their religion and make them accept Christianity, However, British penetration of India was not religious or cultural but strictly economical. This attitude of Muslims soon caused them serious

economic distress (Mallick, 1961). It is said that during the first 75 years of British rule in Bengal, as a consequences of permanent settlement, the Muslim upper class and middle classes either disappeared or were overshadowed by the newly emerged Hindu upper classes in Muslim majority East Bengal (Khan, 1960; Malik, 1963). It is documented that in East Bengal, more than 80 percent of trade, commerce and professional classes were Hindus during the first hundred years of British rule (Latifi, 1968). There was another factor responsible for Muslim disadvantage. When the Indian Mutiny against British power occurred in 1857, it was mainly Muslims who were the instigator, and because of this fact, after suppressing the Mutiny, the British laid the heavier part of the penalty upon the Muslim people. It was approximately a decade later before this discriminatory treatment was lifted (Hibbert, 1978).

In the course of time, Muslims in East Bengal began to look upon the impoverished condition of the Muslim peasantry under the Hindu landlords and also the limited job opportunities available to educated Muslims in contrast to Hindus, and became aware of economic exploitation by the minority community. The educated middle class that developed in Bengal by the end of the nineteenth century was composed almost entirely of Hindus, which affected the previously established harmony in Bengal's social life and was felt more intensely in East Bengal because of its Muslim majority. Moreover, in the last quarter of the eighteenth century, governmental support to religious orthodoxy in both communities influenced the feeling of separateness of Hindu and Muslims, who had previously been brought close by the propagation of humanistic values (see Farquhar, 1919; Muin-ud-Din, 1960; Murshid, 1976). At this stage, Bengali Muslims in East Bengal suffered from a crisis of identity. When differences were sharply highlighted, their long attachment to shared Bengali language and culture

and their identity as Muslims and the consequent attachment to Islamic cultural tradition, put a certain strain on them.

By the end of the nineteenth century, however, the British changed their policy towards Muslims and started to show a predominant favouritism in terms of education and job opportunities, which caused a further deterioration of the relationship between the two communities (Sunderland, 1966). The British policy in India had from the beginning, been known as "divide and rule", which implied upholding the separation which exists between the different religions and values in full force. In line with this policy, in 1905 in the guise of ensuring an efficient administration, British partitioned Bengal into two provinces: East and West, each under a separate Lieutenant Governor.

Although initially none of the Hindus or Muslims supported the partition, soon the advantages of this scheme were realised by the articulate section of the Muslims in East Bengal. They organised a movement in its favour and for the first time they felt their numerical strength and unity in their minority dominated society, and became politically aware. When the pro-partition enthusiasm among Muslims in East Bengal was observed, Hindus in West Bengal started an intensive movement against the breaking up of Bengal and finally, due to the continuing discontent and unrest, Bengal was reunited in 1911. However, Muslims were shocked by the annulment of partition, as the creation of the new province East Bengal had given them ample opportunities for self-improvement.

There is no doubt that this partition issue led to the emergence of open Hindu-Muslim tension in Bengal. For the first time, Hindus and Muslims became diametrically opposed on political issues and the economic grievances of the Muslim community in Bengal got a political outlet. This strengthened a feeling among Muslims that they were economically exploited, culturally subjugated and politically dominated by Hindus. Hence, the search for a separate identity began

among themselves. It was in East Bengal, in 1906, a year after the division of Bengal, that the all India Muslim League was founded to voice Muslim political rights in India in contrast with the existing Hindu dominated National Congress.

In view of the communal problems Hindu Congress leaders always emphasised that native Hindus and intrusive Islam had become only modification of a common civilization in India (see Nehru, 1946). However, within a decade of forming the Muslim league, the point was raised that Muslims were not a minority but a nation in India and therefore they should have a separate Muslim country on the basis of self-determination (Bookman, 1978). Although the Muslim community in Bengal had a separate territorial identification and in every sense was a fragmented society in relation to other Muslim groups in India, during the 1940s the Muslims of Bengal formed an alliance and allied their future with Muslims of other Indian provinces. This was mainly from the fear that on the eve of independence the British might, under Hindu pressure, sacrifice Muslim interests as they had done by the annulment of partition in 1911. In that case despite being the majority, they would have no alternative but to live under Hindu dominance. However the appeal of religious nationalism became so powerful that a distinct separate linguistic and cultural identity was pushed to a subordinate position by Bengali Muslims when India and Pakistan were created in 1947 and East Bengal became an eastern part of Pakistan, 1200 miles away from its western part.

### 1.4 The Growth of Bangladesh as a New Nation.

It was expected that Bengali Muslim interests would have free and full play in the independent Muslim nation country of Pakistan. Due to the insecurity and communal riots, a massive Hindu migration from East Bengal during the first decade after partition facilitated the growth of Muslim markets in goods and

services in the Eastern wing of Pakistan, but soon it was realised Bengali Muslims could only partly utilize the opportunities. Although Bengali Muslims found easy access to the lower and middle ranges of economic activities, top governmental, commercial and industrial positions became virtually the monopoly of non-Bengalis posted to Bengal from the West wing. Similarly, inexperienced Bengalis failed to compete with West Pakistanis in the industrial sector, therefore all big business fields were largely controlled by non-Bengali Muslims either from West Pakistan or by those who had migrated from other parts of India. In fact in many ways, West Pakistanis started to exploit the East Bengal Muslims in the same way as the Hindus in Bengal during the British rule (Lambert, 1959).

The consequence of this disparity was very clear. During the 1950s the evidence was that East Pakistan was actually becoming poorer in per capita terms every year, while West Pakistan was achieving a steady positive growth. No doubt the main reasons for the break up of Pakistan and the emergence of Bangladesh were the lack of Bengali participation in the central decision making process and the colonial style of economic exploitation by the West Pakistanis (Rashiduzzaman, 1982). However, some other factors reinforced this break up as well. People of East Pakistan were numerically a majority in Pakistan but 'Urdu', a minority language, was imposed as the state language. West Pakistanis thought Bengali was a shared language with Hindus and therefore a barrier against building a proper Muslim identity in Pakistan for East Pakistanis. However, in 1952 Bengali students in East Pakistan organised a massive movement and forced the dismantling of this attempt by sacrificing their lives. Now obviously religion as the primary focus of identity started to show signs of decline, language as a unifying factor, on the other hand, began to grow stronger (Kabir, 1987).

Muslims in East Pakistan formed political awareness in the course of a long independence movement in British India. Thus they were no longer

concerned with their position before and after the establishment of Pakistan in East Bengal, but with contrasting the opportunities available in the Eastern and Western wing of the country. The political leaders of East Pakistan developed an elaborate ideological formation which challenged the political doctrines propagated by West Pakistanis to legitimize their dominance over East Pakistan. Ultimately, they demanded a central government responsible for defence and foreign affairs, with all taxation powers vested in the provinces, respect for their national language, democracy and secularism. In the first national election in 1970, the Awami League, the East Pakistan based party received an overwhelming mandate to form central government, but West Pakistanis annulled the election result by force. As a consequence, an irregular civil war broke out and after nine months, at the cost of three million lives, Bangladesh emerged as a new nation in South Asia in December, 1971. The intense feeling of religious similarity, which was the core content in Pakistani nationalism suddenly disappeared and discrepancy in language, culture and feeling of socio-economic deprivation played the cataclysmic part in the growth of Bangladeshi nationalism.

## 1.5 Cultural Differences Between Hindus and Muslims.

In a sense it is true that Hinduism and Islam in Bangladesh emerged only through a gradual modification of a common civilization, but the existing cultural divergence was no doubt fundamental and a brief knowledge of these elementary differences can provide a background for a social psychological analysis of how members of each religious community react to each other. Muslim culture is centred around the religion Islam, which emphasizes monotheism by exclusion like Judaism and Christianity. While Islam refines the one god by denying the many, Hinduism uses the many to approach the one, in other words a pluralism by inclusion. While Muslims consider only the Koran, which contains the divine

message, to be absolute and adequate for their guidance of behaviour, Hinduism permits an unlimited variation in belief concerning the nature of God and a corresponding diversity in cult and standard behaviour.

On the issue of status, Islam democratically views that all mankind are born equal and therefore should be treated as equal to each other. Hinduism, on the other hand, believes that mankind is incapable of achieving uniform status because they are inescapably affected by all their actions in previous existences and recognizes different capabilities and prescribes different duties for the different castes which is determined by birth.

Like many other parts of the Islamic world, Muslims practice their religion as a community. Apart from congregational worship every Friday, they prefer to attend daily prayers in the mosque. Hindus usually prefer to worship alone in their temple and temples may not be open to lower caste Hindus. However, both groups celebrate their festivals on a community basis but again, lower caste Hindus have to celebrate separately. Hindus decorate their temples and home exorbitantly with images of different gods and goddess and use idols in their worship as symbols of divinity. Islam strictly disallows the representation of any animate objects, and Muslims show disrespect to these images.

A very important cultural difference separates Hindus and Muslims in the Indian subcontinent: the Hindus attach a peculiar sanctity to the cow and regard it as equal to mother, as babies survive on cow's milk; therefore, cow killing is considered as unforgivable sin. Muslims, however, count the cow as legitimate food and an especially sacrificial victim in an annual religious festival.

There is one crucial factor responsible for the lack of understanding of each other's religion. The divine book for Muslims, *the Koran*, is written in Arabic as it first came as a guidance towards the backward Arab society, and Muslims in Bangladesh learn to read it in its original form. On the other hand,

the Hindu holy books *Vagabat Gita* and *Ramayana* are written in Sanskrit, a classical and sacred Indian language and Hindus consider the holy book should be read in Sanskrit, its original form. Hence the two religions do not have access to the books which govern each other's lives. In general, both groups feel it is useless to understand the beliefs and social practices of each other and perhaps this mutual ignorance is one of the fundamental causes of mutual rivalry and permanent tension between two religious communities in the Indian subcontinent. In Bangladesh, Hindus and Muslims are alike physically and, with few exceptions, hardly distinguishable in terms of external features, such as dress or speech. However socially and culturally, i.e. in terms of wedding ceremonies or religious festivals, they are obviously distinguishable.

## 1.6 Hindu-Muslim Relations in Bangladesh.

In this age of pluralistic societies, each nation is found to include within its fold a large number of ethno-religious groups which are responsible for the emergence of conflicting intergroup attitudes and behaviour. Bangladesh, in the same way, has its integration problems, one of which is communal tension between the two major religious communities: Hindu and Muslim. Communalism is a widely used term in the Indian subcontinent which can be defined as:

> "... a consciously shared religious heritage which becomes the dominant form of identity for a given segment of society." (Jones, 1968, p. 39)

However, religious communality in this subcontinent is not only related to people's social identity, but to distinction and detriment in society as well (Thursby, 1975); perhaps worse, this religio-cultural distinction has often been used to achieve political ends (Dixit, 1974). Present Bangladesh was subjected to

this religious communalism quite often during and after its affiliation with the Islamic state of Pakistan.

Under the Pakistan regime, Hindus in Bangladesh were repressed, humiliated and deprived under the encouragement of government and fundamentalist political parties and their patriotism was suspected in many ways (Wilcox, 1963). The area that is now Bangladesh was almost 28 percent Hindus in 1941, before the India-Pakistan geo-political surgery (Nicholas & Oldenburg, 1972). According to the 1951 and 1961 population census, they constituted 20 and 18.4 percent respectively, but by 1974 the percentage was down to 13.73 and this migration process is still going on, although the numbers involved are much lower.

In 1971 during the independence struggle, both Hindus and Muslims fought to acquire a separate sovereign state on the principle of secularism. From the very beginning, the aim was to unite the Hindus and Muslims on the basis of their common Bengali linguistic identity, and to highlight several aspects of cultural assimilation in order to transform a potential religious communalism, a product of "two nation theory" in Bengal. Therefore, initially 'secularism' was adopted and practised as one of the main state principles in an absolute Muslim Majority country. Unfortunately as is well demonstrated in countries like India, Pakistan and Bangladesh, in which a single religion dominates, the western concept of secularism is only a fragile myth (D'Cruz, 1988; O'Connell, 1976). Within less than ten years of achieving independence, the state constitution was being simultaneously amended to bring majority religion identity into light from its subordinate position and eventually in 1988 'Islam' was declared as the state religion of the country. In addition, Islamic solidarity with other Muslim countries was proclaimed. However, this reappearance of Islamic sentiment so soon may have some political reasons as well, notably the fear of future Indian

dominance over Bangladesh (Westergard, 1985). This crucial change in constitution was conceived as a direct threat to minority Hindus for their group identity and made them suspicious and frustrated about their future in Bangladesh.

The Bengali Hindus in Bangladesh once held a position of economic, social and political power during the British colonial rule. Now Muslims emerged in a position of socio-economic dominance in Bangladesh. As most of the wealthiest and dominant ruling families of East Bengal migrated to India, existing middle class Hindus play a leading role in their community in Bangladesh. Although, Hindus in Bangladesh are divided between Scheduled caste and non-Scheduled caste, this distinction is not so sharply maintained as in India and as no linguistic diversity exists, they are quite cohesive. Hindus in Bangladesh are religious: by all counts more religious than Indian Hindus, because religion is the only important source of identity that helps them preserve self-awareness and cohesion as a group. In addition, unlike the Muslim minority in India, Hindus are not backward in the field of education, therefore they are competitive with the Muslim majority in most of the job fields.

The existing intergroup relations between Hindus and Muslims in Bangladesh are characterised by mutual suspicion and distrust which occasionally leads to large scale communal disharmony and migration. There are many factors identified to highlight Hindu-Muslim conflict in India (see Saxena, 1984; Schermerhorn, 1971; Sing, 1988). In the case of Bangladesh, the primary factor is a prolonged history of disharmony and violence between two groups and in addition to that, Muslims feel that Hindus are potential collaborators with and more loyal to Hindus in India. Most of the Muslims in Bangladesh believe that, when comparing religious identity and the identity derived from newly achieved nationalism, only the former is well conceived and maintained by Hindus as they

are in the majority position as a religious group in the context of a broad Indian subcontinent. Although, unlike Muslims in India, Hindus in Bangladesh are not subject to overt discrimination, that is physical attacks upon individuals, intentional hooliganism or setting fire to premises lived in or owned by Hindus etc, many Hindus feel insecure by the predominance of the Muslim majority. According to the constitution, no discrimination against any citizen on the grounds of religion, race, caste, sex or place of birth is a fundamental right, and accordingly, a good proportion of Hindus are employed in many government services and educational sectors, but they do feel discriminated against when in practice, no Hindus are able to get a job in the defence force or in the foreign service.

Even though Hindu-Muslim riots have not recurred since Bangladesh was founded, because of historical, geographical and cultural shared characteristics, any single major Hindu-Muslim communal eruption in India could drastically affect the relationship between the two communities in Bangladesh. This was proved in 1990, when a massive Hindu militant group in India attempted to tear down the Ayodhya mosque and build a Hindu temple in its place in the state of Uttar Pradesh. As a result, some Hindu dominated areas in Bangladesh received aggressive attacks from orthodox Muslim militants. Owing to these uncertainties, some Bangladeshi Hindus consciously refuse to acquire property or many material goods because they feel they should remain mobile, in case the situation compels them to move to India.

Hindus in Bangladesh are not concentrated in one part of the country, as for example, Protestants in Ireland tend to be concentrated in Ulster. Because of the dispersed distribution, there are many instances where Hindus and Muslims are living together, maintaining apparently good intergroup contact but in most cases, potential differences are highlighted and evident similarities overlooked.

The degree of mistrust and suspicion shown towards each other is quite high and deep-rooted. Among Muslims social rejection, particularly of caste Hindus is common. However, Muslims get along better with Scheduled caste Hindus who are of a low social status and restricted to specific division of labour, which are essential but in which Muslims have no interest. Overall, Hindus perceive themselves in terms of social comparison as relatively deprived but Muslims vehemently deny this fact and refer to the poor condition of the 100 million Muslim minority in India.

In last few years, Muslims have been making a conscious effort to assimilate three broad factors: language, nationalism and religion, in order to solidify their distinct identity. As a whole, religious fundamentalism is increasing and a definite effort is being made to achieve positively valued psychological distinctiveness (Tajfel, 1978a), by reifying Islamic elements in shared Bengali language and social customs generally. This whole process may gradually lead Hindus towards socio-political alienation and result in them having difficulties in maintaining their positive social identity.

## 1.7 Conclusion.

As a poor developing country since its independence, the country has been trying hard to overcome its problems of poverty, illiteracy, backwardness, over-population, natural calamities and lack of industrial infrastructure: poor relations and mutual distrust among different communities may adversely affect any such development process, therefore maintaining stable intergroup relations is the prime concern in Bangladesh.

As is evident from this discussion, traditions and culture of Bangladesh are deeply religious in origin and communal problems mainly stem from the deep rooted negative attitude or affective state of one religious community's members

towards the other. This is in turn supported by relatively rigid cognitive world views consisting of a set of negative images, beliefs, stereotypes and prejudices about the other community. Therefore, in order to search for any practical aid to improving their complex cognitive intergroup world view, we need to know the underlying psycho-cognitive processes and how these processes help to shape their attitudes, attribution and behaviour in the context of intergroup relations in this specific culture. These psycho-cognitive processes may have been reinforced by a number of non-psychological factors such as the feelings of politico-economic and psycho-cultural insecurities multiplied by contemporary socio-political events and developments.

Although the main aim of this thesis is to focus on underlying psycho-cognitive processes of Hindu-Muslim intergroup relations, in the present chapter different dimensions of these relations have been discussed within a broad perspective of historical, political and socio-economic factors. With a open-mind the reality has been conceived as:

> "Social events have historical precursors, and are often controlled by economic and political processes far beyond the reach of any purely social-psychological analysis." (Brown, 1988a, p. 408).

Therefore it is intended that this chapter provide a good aid to a better understanding of the empirical research reported in the later part of this thesis.

# CHAPTER 2

## SOCIAL PSYCHOLOGICAL THEORIES OF INTERGROUP RELATIONS

### 2.1 Introduction.

In this age of pluralistic societies each and every nation is exposed to somewhat similar intergroup problems, such as race riots, religious intolerance, language groups in confrontation, and nationalistic and regionalistic uprisings. It can be seen from the content of leading European and American social psychology journals of the last twenty years, that research on the topic of intergroup relations has been considered of great importance by social psychologists. Although their interests in this field are more academic and less practical, undoubtedly they have realised:

> "Problems of intergroup relations are undoubtedly the most crucial, the most fateful of all problems in human relations today, especially the ominous shadow of war hanging over the human race." (Sherif & Sherif, 1979, p. 7).

At a social psychological level of analysis, intergroup relations are considered as a psychological phenomenon. Broadly speaking, by intergroup relations we refer to "relations between two or more groups and their respective members" (Sherif, 1967, p. 12). It encompasses any aspect of human interaction that involves individuals perceiving themselves in terms of their group identification, i.e., as a member of a social category, or being perceived by others as belonging to a social category (Tajfel & Turner, 1979). Whatever the groups or social categories are concern in intergroup relations, group antagonism is a products of people's membership of those groups and their "shared social norms" (Oakes, 1983)[1]. Thus, the study of intergroup relations concerns relations between members of different social categories, involving perceptions, attributions,

attitudes, stereotypes, prejudice and overt behaviour, which are guided by the cognitive, motivational and affective processes between groups. From the social psychological perspective of intergroup relations, both the properties of the group themselves and the consequences of membership for individuals, i.e., the subjective world of individuals as members of certain social categories, are important.

## 2.2 Ethnocentrism.

Like many other fields of social psychology, the study of intergroup relations has also been inspired by other related disciplines, such as sociology, anthropology and political science. It was a sociologist, William Graham Sumner (1906) who contributed to modern social science the widely used concepts of ingroup, outgroup and ethnocentrism, in his writing on the basic state of conflict between the "we group" and "other group". In Sumner's words, the "we group" and "other group" concepts were concerned with primitive society, in which a group of people may have some relations to each other which differentiates them from others. Sumner termed intergroup biases 'ethnocentrism', the view of things in which one's own group is the centre of everything, and all other groups are scaled and rated with reference to it. The most important fact which Sumner stated is that ethnocentrism leads people to exaggerate and intensify everything in the make-up of their own group which differentiates them from others. In his words:

> "Loyalty to the group, sacrifice for it, hatred and contempt for outsider, brotherhood within, warlikeness without-all grow together, common products of the same situation." (Sumner, 1906, p. 12)

Sumner suggested a direct and functional link between intergroup conflict and cohesion. He considered ethnocentrism as a syndrome involving mutually reinforcing interactions among attitudinal, ideological and behavioural

mechanisms that promotes ingroup integration and hostility towards the outgroup. Thus, the greater the group ethnocentrism, greater the expected homogeneity of attitudes, beliefs and cohesiveness within the group. In his opinion, ethnocentrism is a universal phenomenon for the formation and differentiation of social groups. He also emphasised that the closer the neighbouring group, the more intense the warfare or intergroup hostility would be.

The 'universality' of ethnocentrism was one of Sumner's basic assumptions. But a large scale survey on ethnocentric attitudes (Brewer, 1968, 1979, 1981; Brewer & Campbell, 1976; LeVine & Campbell, 1972) combining ethnographic, social psychological and field-anthropological methods of inquiry from 30 ethnic groups in East Africa, West Africa, Northern Canada and some of the Pacific islands has proved that any straightforward theory of ethnocentrism cannot be applied universally. Attachment to the ingroup was found in all the groups studied, but this was not as simple a feature as proposed. For example, value connotations of stereotypes about outgroups did not systematically vary with open intergroup conflict and intergroup favouritism was found to be 'relatively independent' of outgroup attitudes. A similar flexibility and diversity of ingroup attachments and outgroup attitudes was found in two other field studies by Klineberg and Zavalloni (1969) and Jaspars and Warnaen (1982).

Although ethnocentrism cannot be viewed in a straightforward way, there is a considerable amount of evidence that such attitudes generally favour one's own national group - for instance, the ethnocentric perspective has been found in a number of cross cultural studies on children's attitudes (see Jaspars, van de Geer, Tajfel & Johnson, 1973; Lambert & Klineberg, 1967; Tajfel, Nemeth, Jahoda, Campbell & Johnson, 1970). However, it is not the case that ingroup favouritism accompanies all forms of group membership. In the complex

industrial society, the individual belongs to more than just one national group. In the case of multiple group membership, the pattern should be found to be different.

There is a great deal of evidence which suggests that members of disadvantaged ethnic groups in particular, do not share the general ethnocentric outlook. For instance Morland (1966) and Goodman (1964) found clear 'ingroup devaluation' when they tested black American children. A similar result was found with a sample of West Indian and Asian immigrant children in Britain (Davey & Mullin, 1980; Davey & Norburn, 1980; Jahoda, Thompson & Bhatt, 1972; Milner, 1971, 1973). Such outgroup preference has also been reported by Vaughan (1964) amongst Maori children in New Zealand. Studies investigating intergroup attribution patterns also reported similar findings. For example, Hewstone and Ward (1985) reported no ingroup favouring bias from a Chinese social minority in Malaysia. But this is not the whole story. In some of the studies with children and adults, the pattern of outgroup preference was not replicated (e.g., Berry, Kalin & Taylor, 1977; Bourhis, Giles & Tajfel, 1973; Brigham 1971; Fox & Jordan 1973; Giles & Powesland 1975; Katz & Zalk, 1974; Taylor & Jaggi (1974). However, it has been suggested that this ingroup devaluation or misidentification is perhaps complexly related with the socio-economic and political climate of the society. Vaughan (1978) has demonstrated a direct relationship between social change and decreased outgroup favouritism in Maori children in New Zealand.

As Sumner suggested, the closer the adjacent neighbour, the more ethnocentrism should be expected. However, many of the facts fail to support this proposition. For example, Mitchell (1956; among migratory workers in the Zambian copperbelt from 20 tribes) and Brewer (1968; among 30 tribes in East Africa) found a negative relationship between physical distance of neighbours

and expressed social distance. Perhaps cultural similarities serve as the most powerful determinant of low social distance. In this respect LeVine (1965) and LeVine and Campbell (1972) have pointed out one important aspect of ethnocentrism on the basis of social structure. According to their anthropological perspective, societies are seldom clearly defined entities. In any society overlapping and similarities with neighbouring groups are common features. Even tribal societies are not small nation states. Therefore, the classic assumption of ethnocentrism cannot be always upheld. With this view, it has been suggested that this cross-cutting structure presumably has an important role in the reduction of ethnocentrism between ingroup and outgroup (see Chapter 4 for details).

## 2.3 Individualistic Theories:

### 2.3.1 The Authoritarian Personality Theory.

Most of the early theories of intergroup relations were "individualistic" in nature, i.e. trying to explain the social groups in terms of the idiosyncratic properties of the individual. This individualistic approach (i.e. seeking explanation in the 'externalization' of inner needs and conflicts within the individual) was captured in F. H. Allport's words:

> "There is no psychology of groups which is not essentially and entirely a psychology of individuals." (Allport, 1924, p.6)

Like all other fields of psychology both theory and research in the psychology of intergroup relations were influenced by Freud. The Freudian model however does not deal directly with relations between groups. Basically it has influenced the development of a highly individualistic approach, an inference from the level of intra and inter-personal processes to that of intergroup process.

Following Freud's psychodynamic model, Adorno and his colleagues (Adorno, Frenkel-Brunswik, Levinson & Sanford, 1950) presented a theory of The Authoritarian Personality. This suggests racial prejudice is a symptom of individual abnormality of psychological functioning. They hypothesized that our political and social attitudes are an expression of a coherent pattern whose roots are deeply grounded in our personality. They believed that personality development involves the repression and redirection of various instinctive needs by the pressures of social forces. For example, parents are the main agents of socialization processes in any society. In many cases they usually over-react in imposing rules, duty, convention and authority. This is in most cases, experienced as unpleasant and in turn makes children both rebel and abominate. The obvious effect of this, they believed, was that the child's natural aggression towards their parents might be displaced on to alternative targets, presumably weaker or inferior to themselves, because of the fear of the consequences of displaying it directly. Adorno et al. suggested that as a consequence, people develop an authoritarian personality syndrome within themselves in which they respect and defer to authority figures, become obsessed with rank and status, and express hatred and make discrimination against weaker others.

In the wake of the second world war and the threat posed by Fascism, research into the types and causes of racial prejudice accelerated. Adorno and his colleagues conducted research which sought to identify "potentially fascistic" individuals, using a personality inventory (the F- Scale). The F- scale distinguished between two personality types: those with potentially 'fascist' tendencies and those with more 'democratic' leanings. Using a combination of psychometric, projective and clinical methods, they demonstrated that adults scoring high on the F- Scale did appear to have had rather different childhoods

and had more rigid and conservative attitudes than did low scorers. A number of other scales were also developed by them to measure hostility towards Jews, anti-negro attitudes, political and economic conservatism and finally, general ethnocentrism, from which Adorno et al. were able to show that individuals differed in their general hostility towards ethnic outgroups of all varieties. Countless experiments and surveys were conducted in which the concept of authoritarianism was correlated with other measures. From 1950 until quite recently, the concept of authoritarian personality has attracted the interest of social psychologists (e.g., Tetlock, 1981,1983, 1984).

Findings of this authoritarian personality research have been scrutinized and a number of shortcomings have been pointed out. Some criticism has focused on methodological and measurement limitations (e.g., Brown, 1965; Cohn, 1953; Couch & Keniston, 1960; Hyman & Sheatsley, 1954). However, perhaps a more important criticism than that raised about methodological aspects is that of locating prejudice in the dynamics of the individual personality. Authoritarian personality researchers tend to neglect situational and socio-cultural factors, which are often much more powerful determinants of discriminatory behaviour between groups than personality factors. Pettigrew (1958) found, in the context of anti-Black prejudice in South Africa, and the north and south of the United States that anti-semitism and authoritarianism were not significantly correlated with anti-Black prejudice. He suggested, in fact that the existence or absence of a culture of prejudice (e.g., social norms) against Blacks may play a role in racial prejudice.

A number of other studies suggest that whether or not whites maintain social distance from blacks is largely determined by situational variables and is not based on personality factors (Campbell, 1971; Seeman, 1981; Stephan & Rosenfield, 1978). Prothro (1952) found that while there were wide individual

differences in anti-semitism amongst Louisiana Whites, they all displayed highly consistent anti-black attitudes. Similarly, Mackinnon and Centers (1956) provided evidence of a correlation between low socio-economic status and high authoritarianism. Some other evidence highlighted the fact that determination of and variation in intergroup hostility is more likely to be related to the perception of relations between one's own and specific other groups rather than the underlying disposition (see Bierly, 1985). It has also been suggested that prejudice develops largely from the matter of conformity to norms (Minard, 1952). In addition, and critical for the Authoritarian Personality Theory, some studies failed to produce clear-cut evidence of underlying motivation and childhood experiences which are the key components of the theory (e.g., Altemeyer, 1981).

Perhaps the most fundamental objection to the explanation of prejudice in terms of the authoritarian personality is that this form of explanation reduces large-scale social phenomena to the psychological make up of individuals. This tendency has been termed 'reductionism', and has been highly criticized particularly by the European social psychologists (e.g., Billig, 1976; Brown & Turner, 1981; Doise, 1978; Israel & Tajfel, 1972; Moscovici, 1972; Tajfel, 1981; Taylor & Brown, 1979).

### 2.3.2 The Frustration- Aggression Hypothesis.

A few years before the appearance of authoritarian personality theory another psychodynamic theory of prejudice had been offered by Dollard and his colleagues (Dollard, Doob, Miller, Mowrer & Sears, 1939). This theory is well known as the frustration-aggression theory, which provided a single explanation for aggression in individuals, aggression within groups and aggression between groups in the wider society. Their hypothesis was that frustration always leads to

some form of aggression, and that aggressive behaviour always presupposes the existence of frustration. Dollard et al. argued that psychic energy is mobilized in order to pursue individual goals and is dispersed by the achievement of the goal. If goal achievement is prevented by the blocking of any sort of goal directed activity, the undissipated energy is experienced as psychic tension which can only be redirected by aggression in a cathartic sense. This catharsis restores a psychological equilibrium. Such aggression is usually directed against the agent of frustration. If that agent is unavailable, then aggression becomes redirected onto an alternative target by the mechanism of stimulus generalization (in which a target is selected as being similar to the frustrating agent) or displacement of aggression (onto a completely different target, probably a scapegoat).

While most of the ensuing research explored interpersonal aggression, Dollard et al. developed an explanation for intergroup prejudice as being the displacement of aggression towards ingroup members onto those of dissimilar outgroups. Dollard et al. believed generality of ethnocentrism comes about, because of the frustration endemic in social existence. Most often, aggression, which is an inevitable effect of frustration, is displaced on to a convenient scapegoat in the form of prejudice against deviants and minority groups, especially if there is a consensus about the appropriateness of antipathy towards that group (Hovland & Sears 1940). They also hypothesized that prejudice may rise because of particular social and economic circumstances. If a society as a whole experiences a severe economic recession, people will become frustrated due to the resultant poverty and hardship. They proposed that the rise of anti-semitism in Germany, following the first world war, was due to displaced aggression which stemmed from the continuing frustration of economic goals following the Treaty of Versailles.

Frustration-aggression theory stimulated an enormous amount of research in the three decades following its publication. Perhaps it is now well proved that frustration is an important cause of aggression but, unfortunately, it is a very inadequate explanation of aggression and prejudice at the intergroup level. The main problem with this theory is its failure to explain why any particular group should be a more obvious target for displaced aggression than any others. In the light of this criticism, however, the theory has undergone substantial revision and more emphasis is now placed on situational cues as the discharger of aggression (Berkowitz 1962, 1974). Yet, even in its revised form, an emotional state (anger arousal) is still seen as a central causal variable. Moreover, it is often very difficult to determine in advance what dimensions are critical for determining dissimilarity or similarity of others (Worchel & Cooper 1979), and hence to know whether prejudice has resulted from the dynamic process of displacement or the more learning-based process of stimulus generalization (Milner, 1981). Billig (1976) and Tajfel (1978b) argue that the origin of collective frustration and the selection of appropriate targets are more probably related to shared goals and norms which are based in turn on common group memberships and intergroup relations.

### 2.3.3 Relative Deprivation Theory.

Relative Deprivation Theory, which is conceptually close to the frustration-aggression hypothesis, was proposed by some political scientists in the early seventies to explain political violence. The concept of relative deprivation was first used by Stouffer, Suchman, DeVinney, Star & Williams (1949) in their book, The American soldier: Adjustment during army life. They reported that Air Force personnel in the U.S. army were more dissatisfied with the promotional system than were the Military Police, although the Air Force personnel had

better opportunities of promotion. They postulated that the personnel belonging to the Air Force compared themselves with colleagues who had already been promoted and not with personnel from another unit where promotion opportunities were very infrequent. On the basis of these findings, the theory was later developed more formally by Davis (1959). The concept of relative deprivation generally refers to a feeling that, relative to certain other people, one is deprived of some desired object.

Gurr (1970), one of the pioneers of this theory, argued that a key factor in generating social unrest amongst subordinate groups is a sense of relative deprivation, which arises from a perceived discrepancy between what one has and what one feels entitled to. This discrepancy can arise from comparison either with one's own group in the past (Davies, 1969) or more often, with other groups (Runciman, 1966). Gurr (1970) provided a causal model of civil strife where relative deprivation appeared as the central variable. He predicted that as relative deprivation increases, it leads to frustration and anger and these psychological states produce aggression. Thus, he concluded that an increase in the feeling of relative deprivation is likely to increase the possibility of violence in any society.

Runciman (1966) was the first to address explicitly the question of relative deprivation in a group context, by distinguishing the terms "egoistical" and "fraternal" deprivation. Egoistical deprivation involves the traditional case, in which an individual feels deprived because of his/her position within a group, but when dissatisfaction arises because of a person's group status in relation to other group(s) in society, fraternal deprivation is experienced. Runciman's (1966) distinction is directly relevant to intergroup relations. Thus, one might expect that a person who experiences fraternal deprivation would be prone to take some form of collective or group action rather than any individualistic action.

Empirical support for this phenomenon has been found in Walker and Mann's (1987) study with unemployed workers in Australia.

Runciman (1966) has shown, from his survey of English class attitudes that comparisons with other groups are a much more potent source of relative deprivation, than comparisons between self and others within a group. Crosby (1982) found that working women were more dissatisfied about the situation of women in general, than about their own personal jobs. Furthermore, it has been found that measures of egoistic and fraternal relative deprivation are very weakly correlated. The significance of fraternalistic relative deprivation as a factor in generating political action has been confirmed in several studies. For example, Vanneman and Pettigrew (1972) found that amongst whites in the USA the holding of racist attitudes and support for conservative political ideology was related to the white respondent's feelings of relative deprivation. Thus, it shows that relative deprivation can be experienced by dominant groups as well as subordinate groups. In reviewing various studies, Abeles (1976) discovered that 'fraternalistic deprivation' was the best predictor of black militancy in USA. Guimond and Dube-Simard (1983) found that fraternalistic, but not egoistic deprivation was directly and positively correlated with support for Quebec nationalism in Canada. Similarly Gaskell and Smith (1984) found that relative deprivation was associated with discontent amongst black and white young men in London. Tripathi and Srivastava (1981) found that feelings of fraternal deprivation among Muslims in India were associated with more hostile attitudes towards socio-economically dominant Hindus. These findings have received considerable research support from other studies also (e.g., Caplan, 1970; Caplan & Paige, 1968).

Perhaps the most crucial advantage of Runciman's version of relative deprivation theory is:

> "It also allows us to go beyond simple motivational models such as frustration-aggression, and to explore the more social bases of intergroup behaviour." (Hogg & Abrams, 1988, p. 42)

The theory and supporting evidence converge on the conclusion that variations in prejudice cannot be explained without reference to the nature of the relations between the groups in question. Relative deprivation theory as a whole has been criticized for its many conceptual and methodological deficiencies (see Walker & Pettigrew 1984). The most critical problem is to specify the referent, i.e., how can one predict which groups will be selected for comparison (Singer, 1981)? Although Runciman (1966) and Gurr (1970) suggest people tend to use 'similar' individuals or groups for purposes of comparison (an idea borrowed from Festinger's (1954) social comparison theory), it has been noticed that in some extreme cases of social unrest members of the subordinate group try to make comparisons with quite different dominant groups. Taylor, Moghaddam and Bellerose (1989) demonstrated that the selection of a comparison group is mostly dependent upon the needs and purposes of the comparing individual or group member. The nature and choice of referent is still one of the key unresolved issues in relative deprivation theory (Martin & Murray, 1983).

Furthermore, the relationship between relative deprivation and behavioural response is not found to be straightforward. For instance, Martin, Brickman and Murray (1984) demonstrated that greater inequality led to stronger feelings of relative deprivation, but not to a greater willingness to engage in collective action. However, the review of studies related to fraternal relative deprivation seems to indicate a close relationship between perceived deprivation and social action for own-group upward social mobility. In view of later developments in intergroup literature (e.g., social identity theory) it may be plausible to suggest that own-group distinctiveness and social comparison are

implied in the fraternal relative deprivation theory. In addition, it attempts to provide some essential elements for an understanding of collective negative action.

## 2.4 Group Theories:

### 2.4.1 Realistic Conflict Theory.

While early theories of intergroup relations, particularly those proposed by psychologists, attempted to explain negative behaviour towards outgroup in terms of intra-individual personality variables or individual drive states, perhaps the most revolutionary approach emphasized the functional relationships between groups, known as "realistic conflict theory" (Brewer, 1979a; Campbell, 1965; LeVine & Campbell, 1972; Sherif, 1966). The intellectual roots of this functional approach can be traced directly to the sociologist William Sumner's writing on ethnocentrism, although a number of common themes in sociology (e.g. Coser, 1956) anthropology (e.g. Leach, 1954) and psychology (e.g. Newcomb, 1960) had also influenced this approach indirectly.

Sherif, who can be regarded as the main contributor of this approach, recommended:

> "We cannot extrapolate from the properties of individuals to the characteristics of group situations." ( Sherif 1962, p. 8)

Sherif proposed that when a group forms in distinguishing itself from outgroups, ingroup norms develop from interpersonal relationships within the group. These group norms in turn define the range and content of acceptable ingroup values and behaviour. And attitudes towards outgroups depend on the actual or perceived relations between the groups in question. The core of the realistic conflict theory is the proposition that group members' intergroup attitudes and behaviour tend to reflect the objective interests of their ingroup vis-a-vis

outgroups. Where these interests conflict, a competitive orientation should develop towards the rival group, which is often easily extended to derogatory prejudiced attitudes and even overtly hostile behaviour. Thus, in realistic conflict theory, intergroup behaviour is explained in terms of the functional relations between groups.

Key contents of Sherif's 'realistic conflict theory' had been adopted from his and his associates' three major naturalistic experiments on intergroup behaviour, which are well known as the summer camp studies. All of these three studies were longitudinal in nature and were designed to show systematic changes in behaviour as a result of changing intergroup relations. In fact, this series of experiments was designed to explore three important stages of group processes: group formation, how intergroup conflicts arise and what course they take, and finally conflict reduction. To decrease the chances of personal acquaintance and profound differences in background, subjects in Sherif's studies were all selected from the same age group (white, middle class and Protestant background) and they were unacquainted with each other prior to their arrival at the camp.

In the 1949 and 1953 experiments, (Sherif, 1951; Sherif, White & Harvey, 1955) the first stage was designed to develop mutual friendship and during this stage boys were allowed to develop spontaneous friendships among themselves. They all shared one large bunkhouse and were free to interact and join in group activities together. In the second stage boys were divided between two cabins, with about two thirds of any boy's best friends placed in the other cabin. By adopting this strategy, Sherif eliminated the possibility of interpersonal attraction as an explanatory factor in group formation in this present research. It was then noted that the pattern of interpersonal attractions among the boys changed, so

that best friends were now chosen more from the ingroup, i.e. from the same cabin.

Sherif's third major experiment in 1954 (Sherif, Harvey, White, Hood & Sherif, 1961), known as the Robbers' cave study, began with two groups of boys who lived in separate cabins and independently engaged in activities such as cooking, camping out, and building, that required the boys in each group to work as a team. In carrying out these group tasks, it was seen that a status hierarchy and leadership structure emerged within the each group. In addition, a kind of group identity subculture emerged, involving nicknames for members, symbols, group secrets and a clear set of norms and values to which all the members adhered. Neither group was aware of the presence of other group.

The next stage was designed to see what would happen when the two groups came into face-to-face contact. Upon learning about the presence of an outgroup, the boys expressed their keen willingness to take part in intergroup competitions. An experimentally manipulated competition where the winner could receive a prize was introduced. On introduction, the intergroup rivalry began in a healthy way, but quickly relations turned harsh and antagonistic. In the first instance, the boys began to taunt and jeer at members of the other group, but by the end of the tournament the two groups virtually refused to talk to each other and began to launch secret raids and attacks on each other's cabin. In addition, Sherif found that the presence of a negatively valued and 'threatening' outgroup obviously increased ingroup solidarity. This connection between intergroup conflict and intragroup cohesion was later confirmed by several other investigators in different experimental settings (e.g., Deutsch, 1946; Julian, Bishop & Fiedler, 1966; Stagner & Eflal 1982). However, no obvious signs of increased outgroup rejection as a result of increased ingroup cohesiveness, as suggested by Sumner (1906), have been found in empirical research (e.g., Dion,

1973).

Apart from this study, Sherif and his associates were able to document in a variety of micro-experiments, systematic and consistent intergroup favouritism in judgements, attitudes and sociometric preferences. Even members of the winning group, who were presumably less frustrated than the losers, actually seemed to show more evidence of outgroup derogation than those who really had been frustrated by being denied the prize. This evidence is highly inconsistent with the authoritarian personality and frustration-aggression approaches. These findings of over-evaluation of own group's products and performance in a competitive group situation have been consistently supported by a series of other studies inspired by the summer camp studies (e.g., Blake & Mouton, 1961, 1962; Brewer & Campbell, 1976; Brown, Condor, Mathews, Wade & Williams, 1986; Kahn & Ryen, 1972). Findings of the mentioned studies (third stage) clearly suggest that cultural, physical and personality differences are not the sole factor for the emergence of intergroup conflict and perhaps a sufficient condition for intergroup enmity is the mere existence of two groups which are competitively interdependent for a desired goal.

The final stage of the Robbers cave experiment was designed to reduce intergroup conflict by introducing different strategies. One attempt to repair the relations between the groups involved giving lectures on brotherly love and forgiveness at the Sunday service, but the peaceful message was completely ignored. Another attempt was designed (in the 1949 study) by introducing a third competing group as a common enemy for both the interacting groups, but it did not bring any lasting change in attitudes between the two original groups (Sherif,1966). Then two other methods were employed to create more harmonious intergroup relations.

Employing Williams' (1947) and then Allport's (1954) hypothesis, which suggested contact between groups would lead to friendlier and less-prejudiced intergroup attitudes, Sherif planned a further attempt. He recognised that mere contact was not sufficient and it should occur under specified conditions: groups of equal status cooperating with each other in an intimate and pleasant atmosphere, backed by social and institutional support. Sherif introduced the equal status contact phase where two groups independently engaged in the same pleasant activities (e.g., going to the movies, eating in the same dining room, shooting off fireworks etc.). However, apparently these events did very little to attenuate the hostilities between the groups; indeed, Sherif reported:

> "Far from reducing conflict, these situations served as occasions for the rival groups to berate and attack each other." (Sherif, 1966; p. 88)

However, Sherif did not introduce prolonged contact. Later developments in the contact hypothesis (e.g., Amir, 1976; Cook, 1962; Hewstone & Brown, 1986; Pettigrew, 1971; Riordan, 1978) provide evidence for both confirmations and disconfirmations of the assumption that ethnic relations could be improved by long term contact between groups under the appropriate conditions, particularly in some cooperation over a common goal, which Sherif emphasized substantially. However, an important problem remained unresolved: if contact at the interpersonal level were to produce some auspicious effect, would this change of attitude generalize to the respective group as a whole? (Hewstone & Brown, 1986; cf. Brewer & Miller, 1984 for a contrary view; Chapter 3 below).

When contact failed to achieve any improvement in intergroup relations at all, an additional requirement was suggested by Sherif - a superordinate goal, which both groups want to achieve (in this sense it is a 'common goal'), but which is unattainable by a single group even when employing all its effort and resources. Introducing a series of these goals, where both groups had no

alternative but to make an effort to achieve the goal cooperatively, did show a clear reduction in the amount of ingroup favouritism and attribution of negative qualities to the outgroup. Several subsequent experiments in different experimental settings have confirmed these fruitful effects of introducing superordinate goals (e.g., Brown & Abrams, 1986; Ryen & Kahn, 1975; Turner, 1981; Worchel, 1979). This superordinate goal strategy has however, been questioned on the grounds that the reduced hostility may have been due not to the cooperation itself but to the successful outcome of the cooperation (e.g., Worchel, Andreoli & Folger, 1977, Worchel & Norvel, 1980).

Furthermore, some natural and laboratory based studies suggest that, in the context of superordinate goals, whether subjects perceive their distinctive group identity as threatened by the convergence of group boundaries may have a crucial role in intergroup cooperation (e.g., Blake, Shepard & Mouton, 1964; Brown, 1978; Brown & Wade, 1987; Deschamps & Brown 1983; Hartley, Kelly & Nicholson, 1983). However, a large number of studies concerning the application of the concept of superordinate goals in naturalistic situations, for example industrial conflicts between labour and management (e.g. Blake, Shepard and Mouton 1964; Blake & Mouton 1962), international conflict (Frank, 1967), children in desegregated school situation (e.g. Aronson, Blaney, Stephan, Sikes & Snapp, 1978; Aronson, 1984) have provided support for the role of mutual interdependence in fostering intergroup cooperation and decreasing intergroup conflict.

As Hogg and Abrams (1988) concluded:

> "Sherif's experiments are an important landmark in social psychology since they provide an empirical demonstration of the discontinuity between individual and group processes." (p. 46)

In this perspective, intergroup attitudes and behaviour are considered as a function of the inter-relationship between groups, not as incoherent intra or interpersonal eccentricities. In addition, rather than considering intergroup behaviour as a statistical aggregation of coexisting similar individual acts, Sherif recognized it as a collective group-oriented phenomenon which certainly opened a new and promising route for future research in intergroup relations.

Realistic conflict theory has probably influenced social psychological research on intergroup behaviour more than any other theory. Despite its influence, researchers have more recently begun to suggest some limitations of its major propositions. For instance, Rabbie and his associates have found important differences between the actual experience of intergroup competition or cooperation and their mere anticipation (e.g. the study by Rabbie & De Brey, 1971, shows anticipated cooperation had no effect on lessening ingroup favouritism). Some studies suggested that subjects felt competitive and motivated for ingroup over-evaluation in an explicitly non-competitive situation (e.g. Ferguson & Kelley, 1964; Rabbie & Wilkens, 1971). This motivated social psychologists to search for a new mediating variable for intergroup discrimination (e.g., Tajfel, 1970; Tajfel & Turner, 1979).

A further problem was identified by Brewer and Campbell (1976) in an ethnographic study testing a hypothesis developed by LeVine and Campbell (1972). They found, in line with LeVine and Campbell, a positive correlation between socio-economic similarity, geographical proximity and attraction for other tribal groups, whereas according to realistic conflict theory similarity and proximity should imply increased competition for scarce resources. Scholars have also questioned whether functional interdependence would be the only sufficient predictor of intergroup cooperation (e.g., Blake, Shepard & Mouton, 1964; Brown & Wade, 1987; Deschamps & Brown, 1983; Worchel, Andreoli & Folger,

1977). During the 1960s and early 1970s several studies openly challenged the functional theory by suggesting that incompatible group goals were not necessary and that ingroup/outgroup membership *per se* seemed sufficient for intergroup competition (e.g., Doise, 1969; Ferguson & Kelley, 1964; Kahn & Ryen, 1972; Rabbie & Horwitz, 1969; Tajfel, Billig, Bundy & Flament, 1971). These studies suggest that a participant's identifications and perceptions in a group situation and mere feelings of competitiveness are more important aspects of intergroup behaviour than objective goal relations.

### 2.4.2 Social Identity Theory.

While research into realistic conflict theory in the late sixties and early seventies raised some doubt about the idea that competition is a critical determinant of intergroup relations, some European psychologists suggested that discontinuities between individual and group behaviour may be attributed to the operation of distinctive psychological processes associated with group membership. This perspective has been greatly elaborated in "Social Identity Theory" (Tajfel & Turner 1979, Turner 1982, 1984), which explicitly aimed to establish a non-reductionist social psychology which would be able to deal with the dynamic relationship between individual and society without absolutely socializing or individualizing it, that is, to explore the social dimension of human behaviour (see Tajfel, 1984).

The social identity approach actually began with the laboratory experiments by Tajfel and his colleagues at the University of Bristol which became well known as the "minimal group paradigm". These experiments were mainly designed to measure the influence of social categorization as an independent variable on intergroup behaviour. In the first part of the experiment, subjects were asked to make judgements or choose between two alternative

options when presented with pairs of stimuli (e.g., abstract paintings by two artists) and then they were divided into two groups, ostensibly on the basis of their own individual judgements. Thus, social categorization was made on the basis of this trivial criterion and therefore it can be said that these groups were purely cognitive; thus they became referred as to "minimal". In the second part of the experiment subjects were asked to allocate rewards to others in the other group or the same category as themselves but never to themselves. In these experiments subjects were prevented from any face to face interaction and complete anonymity of group membership was preserved. The method used for assessing intergroup bias in the "minimal group paradigm" involved a specially designed set of matrices, developed to identify and measure various strategies adopted by the subjects, such as fairness or equal distribution, maximum joint profit, maximum in-group profit and ingroup favouritism (i.e., maximum difference in favour of the ingroup).

A consistent pattern of results has been found using the "minimal group paradigm" (e.g., Allen & Wilder, 1975; Billig & Tajfel, 1973; Doise, Csepeli, Dann, Gouge, Larsen & Ostell, 1972; Tajfel, 1970, Tajfel, Billig, Bundy & Flament, 1971; Turner, 1975); subjects allocated more to the ingroup than the outgroup and indeed tried to maximize ingroup profit. It has been clearly shown that the mere act of allocating people into arbitrary social categories is sufficient to elicit biased judgements and discriminatory behaviour. Although some controversies still persist, particularly on methodological grounds (see Aschenbrenner & Schaefer 1980; Bornstein, Crum, Wittenbraker, Harring, Insko & Thibaut, 1983ab; Branthwaite, Doyle & Lightbown, 1979; Brown, Tajfel & Turner, 1980; Turner, 1980, 1983), the tendency to favour one party over another has been found to be equally strong when parties are members of arbitrary social categories as when one party (outgroup) is a close personal friend (e.g., Vaughan,

Tajfel & Williams, 1981). Although it is proposed that the cognitive process of categorization is solely responsible for the perceived differentiation between two groups and that this behavioural differentiation leads to evaluative differentiation (Doise, 1978; Deschamps, 1984; see Chapter 4 for details), it was later argued that extremity of differentiation could not be adequately explained by this purely cognitive analysis. Thus, social identity theory emphasised the need to maintain differentials between groups as a motivating force.

Tajfel and his associates concluded that this intergroup discriminatory behaviour had developed as a result of social categorization *per se*. And they suggested that as category membership becomes salient, there will be a tendency to exaggerate differences on criterial dimensions between individuals falling into distinct categories, and to minimize differences within the categories. Doise and other researchers have shown that anything which increases the salience of social categorization leads to greater intergroup differentiation (e.g., Doise & Sinclair, 1973). In reply to the question of why people try to maximize the difference between their own group and other group members, Tajfel proposed that in any intergroup situation individuals strive to achieve or to maintain a positive "social identity".

Tajfel (1978a) defined social identity as:

> "..... that *part* of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership." (p. 63)

Categories such as nationality, ethnicity and gender are internalized and constitute a potentially important aspect of an individual's self concept, and become the distinct part of the social identity which is the prime concern of this theory. Tajfel (1978c) proposed that any form of social behaviour can take place

along a continuum defined by the two extremes of absolute interpersonal and absolute intergroup behaviour. Interpersonal behaviour is mediated by our personal identity, but intergroup behaviour is mediated by social identity.

Most recently a theory has been offered by Turner (1984), Turner, Hogg, Oakes, Reicher and Wetherell (1987) known as "self-categorization theory", which can better be considered as a theory of (intra)group phenomena (e.g., psychological group formation, group polarization, conformity etc.) rather than of intergroup relations. However, some of the concepts specified in this theory are very helpful in understanding how the personal self-concept changes to a shared social identity. Turner (1984) and Turner et al. (1987) proposed that the self concept may be divided into two major subsystems - personal (which is specific idiosyncratic attributes of the individual) and social (which is identity contingent self-descriptions deriving from membership of social categories). These two systems are functionally independent of each other, such that one may operate to the exclusion of the other. However, the consequence of decreasing personal identifiability in obvious group situations is not to destroy identity, as suggested in the de-individuation hypothesis (Zimbardo, 1969), but rather to increase the salience of social identity, which is termed as "depersonalization" by Turner (1984). Hogg and Turner (1987) provide evidence that self perception is depersonalized where social identity is salient and can be considered as a consequence of the existence of "shared social norms" (Oakes, 1983).

The social identity approach focuses primarily upon the concept of social rather than personal identity. To formulate the main concepts of social identity, Tajfel and Turner (1979) extended Festinger's (1954) social comparison theory and suggested that our group evaluations are essentially relative in nature; therefore we evaluate our own group's prestige by comparing it to other groups. Originally Festinger referred to social comparison as a within - rather than a

between - group concept. In his theory he emphasised the need to evaluate one's own opinion and abilities by comparing them with those of others so that one can achieve a positive self-image through accuracy in self-evaluation and be able to be perceived positively by others. In Tajfel's theory, the outcome of these intergroup level comparisons is critical for us because indirectly it contributes to our own self-esteem. In this theory a very important part of our self-concept or identity is defined in terms of group affiliations - social identity. It has been empirically supported that the presence of a salient basis for categorization in a given social setting induces individuals to incorporate their respective category memberships as part of their social identity (e.g., Meindl & Lerner, 1984; Turner, 1984) and in turn increases people's social identity (e.g., Wilder & Shapiro, 1991). Tajfel and Turner (1979) suggested that every individual in an intergroup situation needs to preserve or achieve a positive group distinctiveness which in turn serves to achieve, protect or enhance positive social identity.

A direct inference from these views is that a 'minimal' social categorization exerts its discriminatory intergroup effects because it provides a way to enhance positive intergroup distinctiveness. The presumed link between intergroup discrimination and self-esteem was investigated by Oakes and Turner (1980). They found that subjects in a minimal group experiment who were in a control condition and deprived of the usual opportunity to make intergroup reward allocations showed lower self-esteem in two of the three self-esteem measures used than were those who were provided with that opportunity. Lemyre and Smith (1985), Hogg, Turner, Nascimento-Schulze and Spriggs (1986, Exp. 1) confirmed that intergroup differentiation elevates self-esteem, although Lemyre and Smith (in the methodologically most sophisticated study) showed that intergroup discrimination actually restores self-esteem in response to a threat to self-esteem (caused by social categorization) rather than enhances it.

From the opposite perspective, a number of studies did not find any effect of differential self-esteem on intergroup discrimination (e.g., Crocker, Thompson, McGraw & Ingerman, 1987; Hogg & Turner, 1985a, 1985b, 1987; Wagner, Lampen & Syllwasschy, 1986; Hogg & Sunderland, 1991). Hogg and Sunderland (1991) and Wagner, Lamper & Syllwasschy (1986), on the other hand, provided data showing that threatened self-esteem promotes intergroup discrimination. However, Crocker and Schwartz (1985) reported that subjects high and low in self-esteem did not differ in their degree of ingroup favouritism and Crocker et al.'s (1987) study shows that subjects high in self-esteem and experiencing threat showed comparatively greater ingroup favouritism. It is generally agreed that measuring self-esteem by using appropriate techniques is a difficult problem and whether measures involved a global or transitory self-esteem is a vital issue (see Hogg & Abrams, 1988). Taken together these findings raise questions about whether self-esteem and intergroup discrimination are causally related and whether the self-esteem part of social identity theory should remain in its present form.

Discrimination in favour of members of one's own group has also been found in intergroup attribution studies. At an interpersonal level, a tendency to accept greater personal responsibility for positive outcomes (self-enhancing bias) than for negative outcomes (self-protecting bias) has been termed the "self-serving attribution bias" (see Miller & Ross, 1975). At the intergroup level, a similar pattern has been documented, highlighting "ingroup serving" and "outgroup derogatory" tendencies which is termed the "group serving attribution bias" (see Hewstone, 1989; Hewstone & Jaspars, 1984). Pettigrew (1979) termed this tendency the "ultimate attribution error", which briefly refers to a pattern of attributions in which positive (prosocial) behaviour performed by ingroup members and negative (antisocial) behaviours performed by outgroup members

tend to be attributed to the actor's internal psychological make-up, but in contrast to that, negative ingroup behaviour and positive outgroup behaviour tends to be attributed to situational factors. Evidence for the "ultimate attribution error" was found in a study by Taylor and Jaggi (1974) using only socio-economic majority Hindu subjects (Muslims, who were the social minority, were excluded from the study), and was partly supported by Hewstone and Ward (1985) using both majority and minority groups. Several other studies support the "ultimate attribution error" hypothesis (e.g., Duncan, 1976; Feldman-Summers & Kiesler, 1974; Mann & Taylor 1974; Sagar & Schofield, 1980; Stephan, 1977; Stephan & Woolridge, 1977; see Chapter 5 for details).

Although discrimination in favour of members of one's own category relative to members of another category has been demonstrated consistently in both experimental and naturalistic research settings, research suggests this is not always a straightforward strategy. Reward allocation by minimal group subjects might be influenced by a variety of factors other than group membership (e.g., Equity effect (Ng 1986); direct or indirect effect (Ng 1985); status effect (Sachdev & Bourhis 1987) etc.). Mummendey and Schreiber (1983) gave subjects a choice of rating scales, and showed differentiation in favour of subjects' own category only on selective dimensions, but differentiation in favour of the outgroup category on other noncorresponding dimensions. Turner et al. (1987) have recently tried to clarify some misunderstandings concerning self-esteem and ingroup favouritism predictions in social identity theory. They argue that the theory does not suggest that people must always have a positive social identity but that, under particular conditions, negative social identity is "psychologically aversive" (p. 30).

Any attempt to review the key concepts of social identity theory would identify four distinct characteristics of it. Firstly, the social categorization - which

is a basic cognitive tool that allows individuals to structure the social environment and define their place in it. This process of categorization produces an "accentuation effect" (Tajfel, 1957, 1959) which emphasizes similarity between objects within the same category and differentiation between stimuli in different categories. Recently Turner et al.(1987) have tried to explain the cognitive consequences of the involvement of self in the categorization process in their proposed self-categorization theory. They suggested that, just as we categorize objects, experiences and other people, we also categorize ourselves which causes:

> "..... one to perceive oneself as 'identical' to, to have the same social identity as, other members of the category - it places oneself in the relevant social category, or places the group in one's head; and it generates category-congruent behaviour on dimensions which are stereotypic ..... of the category. Self-categorization is the process which transforms individuals into groups." (Hogg & Abrams, 1988, p. 21)

However, in real life situations people do not belong to a single category; therefore criss-crossing of category membership is a common feature in everyday social life. Several anthropological studies suggest that overlapping category membership reduces intergroup conflict (see LeVine & Campbell, 1972). At a theoretical level, the cognitive explanation of category differentiation suggests that while single categorization leads to an accentuation of the differences between and similarities within categories (see Tajfel, 1959), crossing of two categorizations leads to "convergence" between the categories (weakening the interclass effect) and "divergence" within each category (weakening the intraclass effect). These processes in turn cancel each other out and intergroup discrimination is reduced or disappears (see Doise, 1978). Many studies support this proposition (e.g., Deschamps, 1977; Deschamps & Doise, 1978;

Vanbeselaere, 1987, 1991). Social identity theory (Tajfel & Turner, 1979) however, views minimal intergroup discrimination as primarily a motivational and not a cognitive bias. Thus, Brown and Turner (1979) argued that crossed categorization should still constitute "intergroup" situations as people are likely to employ evaluative social comparison processes to obtain a positive self-esteem in these situations as well. Accordingly, they showed intergroup discrimination in crossed-situations but a stronger discrimination against the group which was the outgroup on both categorization dimensions. Most of the experimental and real-life studies on the other hand show reduced differentiation when categories are crossed (e.g., Brewer, Ho, Lee & Miller, 1987; Diehl, 1990; Vanman, 1989). However, later developments in social identity theory have emphasized both cognitive category differentiation and self-evaluative social comparison processes for social identity analysis (see Turner, 1981), thus the absence or presence of discrimination in crossed categorization situations can perhaps be explained in terms of both factors (see Chapter 4 for details).

The second key concept is social comparison - through this process individuals achieve an understanding of the relative status and value of their own group. The outcome of these intergroup comparisons is critical for anybody because indirectly it contributes to their own self esteem. Social identity theory suggests that ingroups do not compare themselves with every cognitively available outgroup; the outgroup must be perceived as a "relevant comparison group".

People try to highlight intergroup differences especially on "relevant relational attributes" (Tajfel & Turner, 1979, p. 41), i.e., those dimensions which reflect favourably upon the ingroup. Applying this selectivity of the accentuation effect, one's ingroup acquires a "positive psychological distinctiveness" which in turn contributes to giving him/her a relatively "positive social identity". These

two are the third and final key characteristics of this theory. In social identity theory, the knowledge that one belongs to certain groups, and the value attached to that group membership in positive and negative terms represents the individual's social identity. The two essential features of the social identity perspective are that group membership is viewed from the subjective perception of the individual, and the value-laden nature of the group membership is regarded as crucial to group processes. Finally, it is proposed that group members have a strong tendency to achieve a psychological group distinctiveness, so that their own group is regarded as positively distinct from other groups.

This tendency to achieve psychological distinctiveness has been supported by not only laboratory studies but also by field studies. Brown (1978) reported that workers in an aircraft engineering factory were concerned with differentiating between 'production' and 'development' groups in terms of their wage levels, even if they received less money as a consequence. Attempts by minority groups to make themselves distinct from other groups by trying to achieve a distinctive language, in particular where identity is threatened are also common (see Giles & Johnson, 1981). A number of experimental studies have shown clear evidence of language divergence where linguistic identity is threatened (e.g., Bourhis & Giles, 1977; Bourhis, Giles, Leyens & Tajfel 1978). Studies in another context by Skevington (1981) with higher status "registered" and lower status "enroled" nurses in Britain, and by Van Knippenberg and Van Oers (1984) with "academic" and "psychiatric" nurses in the Netherlands clearly showed that each group made enormous efforts to maintain positive psychological distinctiveness on relevant dimensions.

Perhaps the most problematic features of social identity theory concern the last two characteristics which seriously challenge its basic proposition. The theory suggests a positive correlation between intergroup differentiation and the

strength of one's ingroup identification. However, only a few studies have provided support for this hypothesis (e.g., Abrams, 1984, involving two rival school groups; Kelly, 1988, findings from British political parties and Kelly, 1990, findings in minority-majority context). From the opposite perspective, Brown, Condor, Mathews, Wade & Williams (1986; in industrial settings), Brown and Williams (1984) and Oaker and Brown (1986; in hospital settings), Struch and Schwartz (1989; with religious groups) have shown that the overall relationship between strength of identification and intergroup differentiation is variable and only weakly correlated. The first two studies by Brown and his colleagues suggest, rather, that perceived conflict with the outgroup was reliably correlated with intergroup differentiation. Smith (1985) has argued at this point that the theory deals mainly with the salience and security of social identity in intergroup relations, and such results can be explained by hypothesizing that the relationship will be mediated by the salience of group membership and the security of ingroup identity. However, studies examining the idea that discrimination would be greater to the extent that group memberships were made salient did not offer much support for the theory. Both Ng (1986) and Sachdev and Bourhis (1985) found biases for non-salient groups only; moreover, Sachdev and Bourhis (1987) found no salience effect. Similarly, studies investigating the effect of status on discrimination have provided conflicting results. For example, Ng (1985) failed to provide any support for differential biases as a function of group status, but Finchilescu (1986) found low status groups were more discriminatory and Sachdev and Bourhis (1987) found low status groups were less discriminatory than the high and equal status groups.

Social identity theory proposes a variety of strategies that might be adopted when social identity is threatened or already negative. These strategies range from the individual to the group level. It suggests that if intergroup

boundaries are permeable, people can possess a social mobility belief system which causes individuals to leave their own group in order to search for a more satisfactory identity. This is an individualistic strategy which implies a physical or psychological disidentification with the ingroup, leaving the group's position unchanged. In classic studies of ethnic identification, Clark and Clark (1947) had found that black children in the USA showed identification with and preference for the dominant white group; similarly a large number of studies in different cultures support this finding (e.g., Milner, 1975; Morland, 1966; Vaughan, 1964). Ross (1977; cited in van Knippenberg & Ellemers, 1990) found in his study that knowing individual mobility was in principle possible, members of low status groups were apt to dissociate from the ingroup, whereas in the case of low status "closed" groups, no such dissociation was observed. In studies reported by Ellemers, Van Knippenberg, De Vries and Wilke (1988) and Ellemers, Van Knippenberg and Wilke (1990), low status groups with permeable boundaries invoked significantly less ingroup identification than low status groups with impermeable boundaries.

A group with an inadequate social identity, in particular where its members see intergroup boundaries as relatively impermeable, may try to adopt some group level strategies which are termed "social change" strategies. Two general classes of strategies are suggested at this level: social creativity and social competition. It is suggested that whether "cognitive alternatives" to the present system are perceived depends upon two facts: firstly the extent to which individuals believe the present intergroup situation can be changed and their position in the hierarchy can be altered (stability-instability); and secondly, the extent to which the present intergroup situation and the hierarchy are seen as just and fair (legitimacy-illegitimacy).

Social creativity strategies occur when intergroup relations are subjectively perceived as legitimate and stable, in other words, to be secure. At this level, this theory suggests that three possible strategies can be expected. Firstly, groups may compare themselves in relation to new dimensions which ensure them a greater chance of defining themselves more positively. In Lemaine's (1966; cited in Brown, 1988b) study, children at a camp were asked to build a hut for their group. The group given poorer materials, although losing the competition rationalized the situation by emphasizing their hut's nicer garden. More recent studies by Abrams and Condor (1984), Abrams, Sparkes and Hogg (1985) and Condor (1986) reported the same tendency in their studies on gender identity. The second strategy might be adopted to redefine the previously negatively evaluated characteristic of the group, so that it is now positively evaluated. Peabody (1968) reported that when various groups agreed about the negativeness of a group description, the trait was rated more positively by the group that possesses it. A third strategy involves selecting new groups for intergroup comparison which are equal or preferably lower status than their own group, so that the outcome of these comparisons is experienced as more favourable. Rosenberg and Simmons (1972) found self-esteem to be higher amongst blacks making comparisons with other blacks than in those who compared themselves with whites. Wagner, Lampen and Syllwasschy (1986) reported that members of low status groups positively differentiated their own group from another low status group to enhance their social identity.

A social competition strategy, which involves direct competition between subordinate and dominant groups in the status hierarchy, arises when the comparison between groups is subjectively perceived to be insecure. When the legitimacy or stability of the status hierarchy is questioned, the subordinate group need no longer remain subordinate and comparison may be made with highly

dissimilar groups. In general, evidence supports the view that secure high-status groups show less bias (e.g., Branthwaite, Doyle & Lightbown, 1979; Vleeming, 1983). But it is also documented that when the legitimacy of status relations is challenged by a subordinate group, it is expected that the superior group will make every effort to defend its position (e.g., Amir, Sharan, Rivner & Ben-Amir, 1979).

Tajfel and Turner (1979) proposed that cognitive alternatives are related to the group member's perception of instability and illegitimacy in the intergroup situation; in addition, the system is seen as changing and as based on arbitrary principles of justice. A number of experimental studies support this idea. For example, Caddick (1980; 1982) reported experiments in which an allegedly unfair, illegitimate procedure was followed to induce status differences. Both high and low status groups increased their intergroup differentiation significantly under the conditions where the status difference was rendered illegitimate compared with the control conditions. In a similar vein Turner and Brown (1978) and Brown and Ross (1982) confirmed that perceptions of illegitimacy and instability were associated with greater intergroup discrimination and in the case of subordinate groups, where the situation was reversed in some cases, this perceived legitimity-stability produced a differential favouritism towards the outgroup. Superior groups whose position in these experiments was illegitimate and unstable tended to emphasize different comparison dimensions, and seek different strategies for distinctiveness, which was not restrained by existing status positions. The role of stability in intergroup settings was investigated in another study by Ellemers, Van Knippenberg and Wilke (1989, cited in van Knippenberg & Ellemers, 1990), which showed that unstable intergroup status relationships enhance ingroup identification in low status groups and tend to invoke competitive intergroup attitudes. This legitimacy-stability concept has also been

investigated in field studies (e.g., Brown & Williams, 1984), but these studies do not support the idea that perceived illegitimacy of the status relationship of two groups leads to intergroup discrimination.

It is true that some of the major assumptions of social identity theory have been challenged by research. Nonetheless social identity theory is relatively extensive in scope, dealing with a large range of individual and collective strategies in intergroup situations. It has led to a huge number of studies in several intergroup areas which continue to clarify the theory and suggest new ideas. It is too early to attempt a final evaluation of the theory (Doise, 1988), but it continues to have the great advantage of focusing on social psychological processes to explain intergroup behaviour, defining the group in terms of the person's perception of group membership.

However, some of the crucial criticisms of the theory are worth noting: individuals do not live by social identity alone (Ng & Cram, 1987) and obviously social interaction in real life contexts involves a variety of societal variables and does not only consist of categorization processes (Doise, 1988), but in the theory, categorization, identity and self-esteem receive so much weight that the importance of societal factors are simply pushed aside. In addition, social identity research also tends to ignore the role of 'personal identity' processes (Ng & Cram, 1987). However, Turner argues that if the self is a cognitive system, then it is of course a socially mediated one and:

> " - the issue is not whether individual or group is more important. The task is to understand reciprocal interdependence of individual and group: how they are functionally interrelated, mutual preconditions, a unity of opposites that creates, *inter alia*, the complexity of the human self." (Turner, 1988, p. 115)

Social identity theory has clearly done this and, as the following chapters will show, it provides a remarkably fruitful framework for social psychological theorizing on intergroup relations.

## 2.5 Cognitive approach:

### 2.5.1 Introduction.

Any attempt to review the last ten years of research on intergroup relations would certainly highlight the fact that:

> "The study of intergroup relations, like many other areas of research in social psychology, has acquired a distinctly cognitive tone."
> (Messick & Mackie, 1989, p. 45)

Most of the recent research is aimed at application of theories of social cognition to the study of group stereotypes. The contradiction began with whether research in the area of intergroup relations would begin from group to individual or from the individual to group. Cognitive researchers in this area obviously accepted Ehrlich's (1973) idea that the aim of a social psychological theory of intergroup behaviour should be to relate cognitive processes to interpersonal behaviour. However, the purpose of the present section is not to provide a historical review of social cognition (see Markus & Zajonc, 1985), but rather to outline the main characteristics of this approach as applied to intergroup relations or more specifically, intergroup perceptions.

In particular, social cognition concerns the study of social knowledge (its structure and content) and cognitive processes (including acquisition, representation, and retrieval of information) in an attempt to understand social behaviour and its mediating factors (see Hewstone & Macrae, 1990; Macrae & Hewstone, 1990). Cognitive theorists believe cognitive processes are both necessary and sufficient for the understanding of stereotypes and a great deal of

research has been motivated by this perspective (see Hamilton & Trolier, 1986). In this approach social stereotypes are viewed as a natural consequence of the automatic operation of human cognitive process. In particular, attention, encoding, storage and retrieval aspects of information processing of individual group members are considered to play an important role in the determination of a range of social judgements (see Stephan, 1985).

Three fundamental questions characterize the study of social cognition: (1) What type of information is attended to and stored, and how is it organised in memory? (2) How are subsequent information processing, judgments and behaviour affected by social information stored in memory? (3) How is stored information altered, both by new information and by cognitive processes? (Sherman, Judd & Park, 1989). The cognitive approach assumes that the human information processing capacity is limited (see Fiske & Taylor's, 1984, "cognitive miser") and, due to this limitation, people use information processing short cuts and strategies (heuristics) to simplify complex problems of judgement, decision, and attribution. Therefore, these strategies produce fast and adequate rather than normatively correct solutions. In the cognitive approach it is not motivational factors but limitations in the human information processing system which are seen as the main cause of biased intergroup perception. However, when a limited amount of information is available, contrary to the "cognitive miser hypothesis", the relevant social category may release additional categorical information, which provides the perceiver with a more elaborate knowledge-base for subsequent judgements (see Medin, 1988). As all social perception and cognition is evaluative in nature, affective involvement is obvious and often social perceivers go beyond the information given; in addition, perception and interpretation of the objects of social cognition can be altered in desired ways, thus social cognition is more complex in nature than non-social cognition.

As already mentioned, research within the cognitive approach mainly encompasses three general aspects of information processing: attention, encoding and retrieval of information. Several process-oriented phenomena have been put forward relating to these three aspects. However, here only some of the main themes of the cognitive approach will be briefly illustrated so that empirical chapters of this thesis can be clarified in light of these themes.

### 2.5.2 Categorization.

In social life each person we encounter is a unique individual possessing idiosyncratic qualities and characteristics. The amount of information potentially available to us about others in our social world is huge and simply unmanageable by our limited information processing capacity. We therefore need to simplify things to make our experiential world more easily understandable.

> "One of the ways we do so is by seeking the commonalities among the individuals we encounter in our social world, and we use those commonalities as a basis for grouping those individuals that share these common properties or attributions." (Hamilton & Trolier, 1986, p. 128)

Thus, we classify individuals into categories as a means of simplifying our social reality. And once a category is activated, the social perceiver has available a range of stereotypical preconceptions which can bias all stages of information processing. Essentially, social categories serve two basic functions: firstly, they simplify a complex stimulus environment, and secondly, they enable the perceiver to draw additional inferences on the basis of knowledge of category membership.

Perceiving the world in terms of categories and generalizing across individuals are thus natural. Objects are assigned to categories on the basis of their similarity along one or more defining dimensions. The "classical approach"

has viewed categories in terms of a single common attribute (see Smith & Medin, 1981 for details), however, the members of everyday categories may not always share a set of single sufficient features critical for their category membership. Therefore, in reality all social categories encompass a continuum of category memberships; some people being better examples of category members than others. A more liberal approach considers social categories as "fuzzy sets" where members of a category vary in their degree or strength of category membership (see Rosch, 1978). This is particularly so with those social categories whose defining boundaries are often imprecise (LeVine & Campbell, 1972).

In categorization phenomena assimilation and contrast effects are likely to be activated. These refer to the fact that intracategory similarities and intercategory differences are accentuated so that categories are perceived to be as distinctive as possible (e.g. Allen & Wilder, 1979; Doise, Deschamps & Meyer, 1978; Tajfel & Wilkes, 1963). However, there is some evidence to suggest that people tend to accentuate similarities between outgroup members more than between ingroup members (see Wilder, 1984). Interaction with a certain category can lead to the formation of sub-categories, resulting in a hierarchy of categorizations (Feldman, Crino & Velez, 1980; cited in Stephan, 1985). Many studies have demonstrated that race and sex are the basic categories in information processing about others (McCann, Ostrom, Tyner, & Mitchell, 1985; Pliske & Smith, 1979; Smith & Branscombe, 1986 cited in Stephan, 1989) and may be used so frequently that their application becomes automatic (Bem & Bem, 1977).

### 2.5.3 Schemata.

Schemata is probably the term most widely used by social cognitive researchers. It has been defined as:

> "an abstract or generic knowledge structure, stored in memory, that specifies the defining features and relevant attributes of some stimulus domain, and the interrelations among those attributes." (Crocker, Fiske & Taylor, 1984, p. 197)

Schemata are derived from generalizing across one's experience with the social world (Markus & Zajonc, 1985). This generalization in turn affects the subsequent information filtering, integration and organization processes concerning our social perception. Schemata do not only organize and interpret new information, they also facilitate encoding, storage and retrieval of relevant information. In addition, they can affect the time it takes to process social information and the speed with which social judgements can be made. Schemas also play interpretative and inferential roles. For example, they may fill in data that are missing or unavailable in a stimulus structure. Many social cognition writers (e.g., Hamilton & Trolier, 1986) infer that stereotypes are a type of schema which contains a store of information about a particular social group. It is suggested that information that fits our stereotypic expectations or schema would be more likely to enter our information processing system, and a stereotype schema can provide an organized structure within which that information can be stored and represented in memory. Cognitive theorists suggest that, once activated, a schema operates as a self-fulfilling prophecy which to some extent distorts our perception and memory to confirm the schema oriented knowledge and even create schema-congruent behaviour in the object of perception (see Jussim, 1986; Snyder, Tanke, & Berscheid, 1977).

Schemata that appear most relevant to intergroup relations are self-schemata, out-group schemata, role-schemata and causal schemata. A number of studies suggest that self-schemata affect the speed of processing of schema-relevant information. Markus and Smith (1980) found that males to whom

masculinity was a schematic trait had longer response latencies when judging whether others had masculine traits than when judging feminine traits which were nonrelevant to them. Taylor and Crocker (1980) has suggested that schema-relevant information is processed faster than non-schematic information only when processing is automatic. Self-schemata can influence not only the speed of schema relevant information processing but also what information will be encoded in our memory. For example, Markus and Smith (1980) and Tunnell (1981) found that male or female subjects who had self-schemata for masculinity or femininity described others of their own gender with more masculinity or femininity traits than did other subjects who were aschematic. Several studies have also shown that self-schemata facilitate the subsequent recognition and recall of schema-relevant traits contained in descriptions of others (e.g., Higgins & King 1981). A set of studies by Linville and Jones (1980) have provided some support for how ingroup and outgroup schemata may affect evaluations of group members. They suggested that people usually have relatively less complex schemata about outgroups which lead to extreme judgements of outgroups (see section 5.6 below).

In social judgement processes role-schemata play a very crucial part. Role-schemata are the cognitive structures that organize our knowledge about appropriate norms and behaviour for different broad social categories in society. Thus, intergroup perception and stereotyping are bound to be affected by role-schemata. As Fiske & Taylor (1984) suggest:

> "One way to think about stereotypes is as a particular type of role schema that organizes one's prior knowledge and expectations about other people who fall into certain socially defined categories." (p. 160)

Once a group of people are categorized as a distinct social entity, this whole category is perceived in terms of stereotypic role relations and, particularly if the

group is considered as an outgroup, people perceive them as a homogeneous group, regardless of their within group role variability (Linville & Jones, 1980; Quattrone & Jones, 1980; see section 5.6 below). Apart from that, role schemata can easily elicit appropriate stereotypic interpretations. For example, a female colleague being sarcastic may be seen as spiteful but the same conduct by a male may be regarded as cynical (Taylor, Fiske, Etcoff & Ruderman, 1978). Several studies suggest that role schemata can affect our memory. Role schemata can lead subjects to remember central categorical role information even though they are unable to remember any details about the person. For example, in viewing a videotape of a woman having dinner in a restaurant with her husband, subjects who were briefed that the woman worked as a waitress particularly remembered her drinking beer but subjects who were briefed that she was a librarian remembered her wearing spectacles (Cohen, 1981). Thus, people often forget the individuals but remember the schema related to the categorical roles of the individual member.

Finally, causal schemata enable us to infer the causes of own and outgroup behaviour as an active information processor. These schemata are ready-made beliefs and preconceptions, built up from our experience, about how certain kinds of causes interact to produce a specific kind of effect (Kelley, 1972). When social categories and causal schemata are both activated in a given situation, the causal explanation most likely follows from the stereotypes and expectancies congruent with that category. For example, Deaux and Emswiller (1974) reported males' successful performance on an expected male specific task was attributed more to ability than was a female's successful performance, by both male and female subjects. Similarly, Darley and Gross (1983) showed that socio-economic class stereotypes influenced perceivers' interpretation of a girl's academic performance. Attribution theories suggest that perceivers make a

fundamental distinction between whether the cause of a behaviour is manifest within the actor (internal) or represents the influence of situational constraints (external). In many contexts, particularly where an observed behaviour is ambiguous, stereotype-based schema or expectancies can affect the perceiver's inference or interpretations of such occurrences (e.g., Duncan, 1976; Sagar & Schofield, 1980). As schema-based social information processing is fast and relatively efficient, presumably schema-confirming attributions follow a strategy of "minimum causation" (Shaklee & Fischhoff, 1979; cited in Hewstone, 1988). Thus, in explaining schema-consistent or expectancy-confirming behaviour, perceivers may simply rely on the explanation implied by the stereotype, not even bothering to consider additional information (Pyszczynski & Greenberg, 1981).

### 2.5.4 Expectancies.

In the social domain schemata provide perceivers with expectancies about what will happen in specific situations and what to expect from members of a specific category. This knowledge not only serves to focus the perceiver's attention but also structures what is to be perceived and provides schema based interpretations of behaviour. Stephan (1989) highlighted three sequences of expectancy-confirmation process:

> ".... procedures elicited from production memory leading to the collection of expectancy-confirming information, proceeding to the biased processing of expectancy-confirming and disconfirming information and ultimately leading to behaviour that will elicit self-fulfilling prophecies." (p. 43).

The initial effect of expectancies is that they bias the selection of information which is to be processed. In a series of studies, Snyder and Swann (1978) and Snyder and Cantor (1979) examined how people tested a hypothesis

they were presented with about another person. Results showed a strong tendency towards hypothesis-confirmation, i.e. subjects asked questions that would tend to provide confirming evidence, rather than to disconfirm the hypothesis. Thus, stereotypes generate expectancies, and perceivers seem to want to see their expectancies confirmed. Moreover, studies by Snyder and Frankel (1976) and Eisen and McArthur (1979) support the hypothesis that this bias toward collecting expectancy-confirming evidence is followed by a bias towards selectively attending to expectancy-confirming information during social interactions. As a reason for this tendency, it is suggested that seeking expectancy-confirming evidence is cognitively more efficient than seeking information that disconfirms expectancies (Skov & Sherman, 1986). However, studies suggest that active attempts to overcome these expectancies on the part of the subject could be successful (e.g., Langer & Abelson, 1974).

The evidence that expectancies influence attention is well established. When relevant but ambiguous information is presented in association with category identification, category stereotypes establish expectations that are perceived as being confirmed. For example, Sagar and Schofield (1980) and Duncan (1976) demonstrated that pictures of ambiguously aggressive behaviours were interpreted by white subjects as more hostile and threatening when performed by a black stimulus figure than when the offender was portrayed as white. Some studies indicate that category based expectancies not only may affect the perception of social situations, but often lead people to expect and perceive behaviour that is related to the category even though it has not been observed in reality. For example, Rothbart, Evans and Fulero (1979) found that where subjects had prior expectancies that a group would consist of either intelligent or friendly people, they perceived a higher frequency of intelligent or friendly behaviour despite the fact that the actual frequencies of these behaviours were

equal in the experiment. Studies by Cantor and Mischel (1977), Higgins, Rholes and Jones (1977), Hamilton and Rose (1980) and Winter, Uleman, and Cunniff (1985) provided results consistent with this findings that expectancy-confirming information is readily encoded and utilized as a basis for subsequent judgements. However, under some conditions, particularly when the expectancy is strong and unambiguous, there is a tendency to attend to information that is disconfirming (e.g., Hastie & Kumar, 1979; Srull, Lichtenstein, & Rothbart, 1985).

It has been predominantly shown that when social categories are used, the pre-existing conceptions (schema) and expectancies related to these categories influence not only how incoming information is organised but also how it is retrieved from memory. Generally, both expectancy-consistent (e.g., Brewer, Dull & Lui, 1981; Cohen, 1981; Lui & Brewer, 1983) and expectancy-inconsistent (e.g., Crocker, Hannah & Weber, 1983; Hastie, 1984; Hastie & Kumar, 1979) information appear to be more easily recalled than expectancy-irrelevant information (Brewer, Dull & Lui, 1981; Cano, Hopkins & Islam, 1991). However, Hewstone (1989) concluded that when all the evidences is taken together, better recall of exceptancy-consistent information than exceptancy-inconsistent information is supported, particularly when research uses well-formed beliefs, such as stereotypes.

### 2.5.5 Prototypes.

Cognitive theorists suggest that when an individual is classified into a social category, he/she is compared with the most typical member of the category, and a judgement depends on the degree of similarity between the two. The prototype contains a list of the features or attributes assumed to be true of the group as a whole, which is stored in memory and used to organize information. Presumably this abstract knowledge is derived from social learning or from multiple

experiences with individual category members, and the critical features shared by most category members are determined and represented in memory by a single cognitive structure - termed as prototype (Posner & Keele 1968; Reed 1972). Thus, a prototype can be conceptualized as an abstracted representation of the "typical" or "most representative member" of a particular category. Consequently, a prototype can be characterised as the mean or central tendency within a particular category. Originally, the approach proposed that social categories are arranged hierarchically, with a most useful intermediate level functioning as basic. One important question is how new information is placed into a particular category. It is suggested that new instances are compared with the abstracted prototype (the central tendency in the category) and are judged in terms of their goodness-of-fit to the category prototype. In other words, to what extent they possess the common characteristics of the category.

In any category based situation people's judgements depend on the degree of resemblance between an exemplar and a prototype, the dominance of category-congruent traits in the given information and also the frequency of behaviours which are inconsistent with the prototype (Cantor & Mischel, 1979). It has been demonstrated that when information is limited, people most likely rely on the presence of behaviour consistent with traits that are central to the prototype. Similarly it is natural that prototypes are used more frequently to judge members from "fuzzy" categories than from basic categories (see also Mayer & Bower, 1986). It is generally found that exemplars that are high in prototypicality for a given object category can be categorized faster, can be learned with the least effort, are subsequently more available, and have a greater facilitation effect on information processing than exemplars that are low in prototypicality (Rosch, 1978; cited in Stephen, 1985).

It is now increasingly suggested that purely prototypical models should be complemented or supplemented by exemplar models (Elio & Anderson, 1981; Hintzman, 1986) where information about individual category members is stored. As in many social situations (e.g., judging ingroup attributes) people may make estimates about how variable the group is and may try to correlate the attributes within the category; a single summary prototype does not easily handle this problem (see for a review Fiske & Taylor, 1991; Messick & Mackie, 1989). Recently Park and Hastie (1987) found judgements about variability of outgroup members to be unrelated to judgements about the outgroup as a whole, while strict prototype or strict exemplar models predict a substantial relation between two. In contrast to strict prototype and pure exemplar approaches, Park, Judd and Ryan (1991) recently proposed a "mixed" model where both specific individual instances of category and abstracted subtypes are cognitively represented and which enable us to make judgements about the group as a whole by retrieving and integrating information about exemplars. They argued, however, that we retrieve both types of information for the ingroup but only the abstract summary for the outgroup.

### 2.5.6 Outgroup Homogeneity Effect.

A number of researchers pointed out the assimilation effects in the categorization process (see Stephan, 1985). Assimilation occurs when within-category similarity is perceived to be greater than it actually is. One of the major effects of assimilation on intergroup relations is to increase the tendency to perceive and interact with others in terms of deindividuated group membership. Studies by Chance, Goldstein and McBride (1975) and Malpass and Kravitz (1969) suggested that assimilation effects may operate differently for ingroups and outgroups. Subjects in these studies showed better memory for the faces of

strangers who were ingroup members than faces of outgroup members. Brigham and Barkowitz (1978) in a similar study found that blacks and whites more easily recognized faces of ingroup members than of outgroup members. In contrast, Taylor, Fiske, Etcoff and Ruderman (1978) found an assimilation effect for both ingroup and outgroup members and in a study comparing students in integrated or segregated schools, Stephan (1978) found that outgroups were perceived as being more differentiated than the ingroup. However, despite some exceptions, studies suggest that in most cases assimilation effects are greater for outgroup members than for ingroup members.

On the basis of empirical findings, Linville and Jones (1980), Quattrone and Jones (1980) and Wilder (1981) have proposed that outgroups are perceived as being more homogeneous than ingroups (see also Jones, Wood & Quattrone, 1981; Judd, Ryan & Park, 1991; Linville, Fischer & Salovey, 1989; Linville, Salovey & Fischer, 1986; Quattrone, 1986; Wilder, 1984). In the same vein, Park and Rothbart (1982) found that individuals usually recalled more differentiating information about an ingroup than about an outgroup stimulus person. A meta analysis of all relevant research suggests that the outgroup homogeneity effect is predominant and more reliable than the ingroup heterogeneity effect, and is even stronger for real-life groups than for artificially created groups (see Mullen & Hu, 1989). However, there is now growing evidence that the perception of relative outgroup homogeneity and ingroup variability should not be considered an "invariable cognitive rule" and can also depend on various societal factors (see Simon, in press). For example, in line with self-categorization theory (Turner et al., 1987) the ingroup may be perceived as homogeneous on dimensions relevant to ingroup definition or social identity (e.g., Kelly, 1989; Simon & Pettigrew, 1990); and ingroups occupying a numerical or social minority position may perceive themselves as more homogeneous than the outgroup, thus creating a

high degree of group cohesiveness where minority group identity may be threatened (e.g., Brown & Smith, 1989; Simon & Brown, 1987; meta-analysis by Mullen & Hu, 1989; see Chapter 4 below).

A number of explanations have been offered for this "outgroup homogeneity effect". Firstly, it is assumed that people are motivated to search for uniqueness and individuation of the ingroup vis-a-vis outgroup (Quattrone & Jones, 1980; Wilder, 1986a). Secondly, it is proposed that people perceive the outgroup as relatively more homogeneous so as to justify treating the outgroup in a negative way (considering the whole group as a deindividuated entity; Wilder, 1984; 1986a). Finally, a purely cognitive assumption is that we may perceive outgroups as less variable because we interact more frequently and perhaps intimately with ingroup members which in turn reveals the individual uniqueness of ingroup members.

Parallel to the last explanation, Linville and Jones (1980) proposed a "dimensional complexity hypothesis" where they stressed the relationship between the differential amount and quality of interaction and the larger number of dimensions of knowledge about ingroup than outgroup members. And it should be noted that people usually have more complex representations of their ingroup, even when they have equal familiarity with outgroup members (see also Linville, 1982, Linville, Salovey, & Fischer, 1986). This differences in category complexity may lead to differences in the extremity of evaluation of outgroup members (complexity-extremity hypothesis; Linville, 1982). Differential cognitive representations of groups may to some extent be correlated with the perceived homogeneity effect, but there are some studies that have failed to achieve empirical support for a direct relationship between perceived outgroup homogeneity and evaluation (e.g., Linville & Jones, 1980; Park & Rothbart, 1982). Some studies even provided conflicting findings, for example, studies

reported ingroup favouritism as a consequence of both perceived outgroup homogeneity (e.g., Simon, Mlicki, Johnston, Caetana, Warowicki, van Knippenberg, & DeRidder, 1990) and ingroup homogeneity (e.g., Brown & Smith, 1989; Simon & Pettigrew, 1990).

In line with their previous work, Linville and her colleagues (Linville, Fischer & Salovey, 1989; Linville, Salovey and Fischer, 1986) proposed from their recent experimental studies that greater familiarity leads to more differentiation and perceived variability among ingroup members than outgroup members. This hypothesis, supported by an exemplar-based model, assumes that perceivers store multiple exemplars or instances of information in memory, but at least initially active abstraction may not be necessary. Judgements about the category are made by retrieving a sample of exemplars, and constructing a distribution of these on the dimension in question. In contrast, Judd and Park, (1988) and Park and Judd (1990) proposed that categories are represented by stored central tendencies or abstractions which provide information about what the category is like as a whole (e.g., Park & Hastie, 1987) and in conjunction with this prototype information about particular instances of the category provides variability information. However, in their view exemplar-based information should be less likely to be used in particular for judgements of outgroup homogeneity.

There are some studies which have shown results contradictory to Linville and her colleague's position: Jones, Wood and Quattrone (1981) and Park and Judd (1990) did not provide any supporting evidence for the claim that more acquaintance with a group leads to descriptions of the group as more variable. At the theoretical level, ingroup homogeneity effects for minority groups (e.g., Brown & Smith, 1989; Simon & Brown, 1987) pose a direct challenge to both Linville et al.'s (1986, 1989) and Park and Judd's (1990) argument. However,

Linville et al. (1989) acknowledged that familiarity may be a sufficient prerequisite to produce perceived group variability, but is not absolutely necessary. At the cognitive level, there are many other factors, for example, actual variability among group members, and factors related to encoding and retrieval process which may be responsible in addition to any differences in familiarity (see Park, Judd & Ryan, 1991).

This tendency to perceive outgroups as more homogeneous presumably helps people to generalize from the stereotype consistent behaviour of an individual group member to the group as a whole in the case of outgroup more than in the case of ingroup (see Park & Hastie, 1987; Quattrone & Jones, 1980). For example, Nisbett, Krantz, Jepson and Kunda (1983) provided evidence that subjects made stronger person to group generalizations for the outgroup than for the ingroup. Very little empirical information is readily available concerning how perceptions of group variability and information processing are associated to each other. However, Park, Judd and Ryan (1991) hypothesized that where a group is viewed as highly variable, rather than relying only on the category based prototypical information, people may employ such information collecting strategies which allow the group stereotypes to be disconfirmed for the target individual of that group. Future research relating to information processing and perceived variability will hopefully address these issues.

2.5.7 Discussion.

The social cognition approach in intergroup relations has been criticized from different angles. The most prominent criticism has been that theorists have treated the social phenomena as asocial (e.g., Forgas, 1981; Markus & Zajonc, 1985; Moscovici, 1982; Wyer & Srull, 1984), and that the prime concern namely the stereotypic characteristics applied to individual category members, has

ignored the category itself (e.g., Locksley, Borgida, Brekke & Hepburn, 1980; Taylor, 1981). As Kraut and Higgins (1984) have argued:

> "study of social cognition is only marginally social (because) the emphasis is on the asocial determinants of cognitions about social phenomena." (p. 87)

Extending these major criticisms, it has been suggested that social cognition researchers try to relate their work to person perception (e.g., Hamilton, 1981) by focusing attention on person memory structures, judgemental heuristics and so forth, thereby overlooking the nature of the relationship between groups which is crucial for a better understanding of intergroup relations.

There is a common misinterpretation of the approach that it erroneously attempts to explain all aspects of social stereotypes solely in terms of 'cold' cognitive information processing mechanisms (e.g., Pettigrew, 1986). However, it has always been acknowledged that social stereotypes are almost certainly multiply determined by several processes, including cognitive, societal, affective and motivational factors (e.g., Hamilton & Sherman, 1989; Hamilton & Trolier, 1986). There is little doubt that cognitive processes both mediate and are mediated by motivational-affective effects (Hewstone, 1989). Therefore, cognitive social psychologists show an ever-growing concern with the importance of motivational and affective factors on group processes. For example, recent writings on impression formation (Brewer, 1988; Fiske & Neuberg, 1990), social inference (Pyszczynski & Greenberg, 1987) and attributional bases of intergroup conflict (Hewstone, 1988) associate the complex interaction of cognitive, motivational, and affective factors in the processing of social information.

Clearly the social cognition approach cannot be considered as a complete theory of intergroup relations, particularly when this approach is still in its

developing stage. Taking in to account criticisms against the application of this approach to intergroup phenomena, it can however be said that the insights gained from the study of social cognition are important for our understanding of the cognitive processes underlying intergroup relations.

## 2.6 Implications for Empirical Research.

In this chapter the development of the major social psychological theories which have stimulated most of the research in the area of intergroup relations have been discussed.[2] Obviously, no one single theory of intergroup relations can be regarded as absolute and complete, thus the study of intergroup relations will benefit from a combination of approaches. In line with this view, the original empirical research presented in the following chapters extends over three broad issues in intergroup relations.

The first reported study (Chapter 3) sets the scene by investigating how different dimensions (e.g., equal status, cooperative, intimate and pleasant contact) influence attitudes towards the outgroup in a minority-majority context (Hindu-Muslim relations in Bangladesh). In addition, based on the review of social identity theory, a number of interpersonal-intergroup aspects of contact were included to investigate how these factors were perceived in real-life contact situations. Two additional aims of this study were: firstly to identify those variables which contribute to making people apprehensive about coming into contact with an outgroup and secondly, whether differential contact has any impact on variability judgements about a group.

Chapter 4 reports two studies dealing with the impact of crossed categorization on intergroup relations. As is clear from the discussion in chapter 1, both Hindus and Muslims in Bangladesh have multiple category memberships. They speak the same language, share the same national identity, but in terms of

religious categorization they are different. The first study in this chapter was mainly aimed at testing the relative psychological strength of two categories: religious and national identity. In this study target-evaluations in different criss-cross categorization situations were compared. Whether crossing different psychologically unequal categories could have any positive effect on intergroup relations was examined in this way and this study also aimed to test whether crossed categorization had any impact on perceived outgroup homogeneity. The second study reported in this chapter also investigated the relative psychological strength of linguistic identity in relation to religious and national identity and addressed the issue of how cognitive and motivational processes may work in criss-cross categorization situations, by relating perceptions of group variability and self-esteem with subjects' evaluations in different cross-categorization situation.

Finally Chapter 5 considers in more detail one of the central cognitive processes which may play a vital part in intergroup relations - causal attributions. The three studies in this chapter were designed to elicit intergroup attributions from both Hindu and Muslim groups by presenting different descriptions which described a socially desirable or undesirable behaviour exacted by either an ingroup or an outgroup member. In addition, in line with the growing concern to relate affective and motivational perspectives with cognitive aspects of intergroup bias, two new investigations were carried out. Firstly, in two studies affective consequences of intergroup attributions were studied by searching the link between rated causal dimensions (i.e. locus of causality, stability, controllability and globality) and expressed positive and negative affect. Secondly, in the third study the impact of ingroup-favouring or outgroup-derogating attributions on self-esteem were assessed. These studies also show how blatant group-serving biases by a dominant group (Muslim) can be attenuated by crossing social

categorizations (see Chapter 4), and how relatively unbiased attributions by a minority group (Hindu) can be made more ingroup-serving by making intergroup categorization more salient.

Together it is hoped that the series of studies in these three chapters provide a clear and original cognitive-intergroup analysis of some of the dimensions of Hindu-Muslim intergroup relations in Bangladesh. In addition these findings provide a good opportunity to examine the extent to which findings from laboratory studies are applicable to real-life intergroup issues and hopefully supplement and advance current knowledge of social-psychological and social-cognitive analyses of intergroup behaviour.

Notes.

1. Horwitz & Rabbie (1989); Rabbie & Horwitz (1988) believe groups and categories are conceptually two distinct aspects of intergroup relations. They highlighted particularly the interdependence aspect of group membership which in their opinion not an essential factor in case of category.

2. To shorten this chapter some of the interpersonal theories like Social Exchange theory (Homans, 1961; Thibaut & Kelley, 1959), Belief Congruence theory (Rokeach, 1960, 1968) have been excluded. However, like the mentioned individualistic psycho-dynamic theories these theories deal mainly with relations between individuals, and do not offer direct implications for intergroup relations. For obvious reasons, their application to intergroup relations has been criticized (see Brown & Turner, 1981; Stephenson, 1981).

# CHAPTER 3

## INTERGROUP CONTACT AS A PREDICTOR OF OUTGROUP ATTITUDES, PERCEIVED OUTGROUP VARIABILITY, AND INTERGROUP ANXIETY

This study tested an elaborated version of the "contact hypothesis" in ethnic relations, in a real-life study of minority (Hindu) and majority (Muslim) ethnic groups in Bangladesh. The relationship between dimensions of intergroup contact and three criterion variables: outgroup attitude, perceived outgroup variability, and intergroup anxiety was investigated. Outgroup attitude is the standard criterion used in studies of intergroup contact, but the other two measures provide a more sophisticated test of the contact hypothesis. Multiple regression analyses revealed that dimensions of contact were significant predictors of all three variables, although different dimensions emerged as best predictors in each case, and predictions were generally better for the minority group who reported higher levels of contact. The specific nature, rather than quantity, of contact was the best predictor of outgroup attitudes; quantity of contact was the best predictor of perceived outgroup variability; and perceptions of typicality and awareness of intergroup differences were the best predictors of intergroup anxiety, which itself was negatively associated with outgroup attitudes and perceived outgroup variability. The results illustrate the need for multiple criterion variables in research on the contact hypothesis.

## 3.1 INTRODUCTION

The 'contact hypothesis', in its original form, states that mere contact among individuals from different groups creates an opportunity for mutual acquaintance, enhances understanding and acceptance among the interacting group members, and in turn decreases prejudice towards the outgroup (Williams, 1947). Thus, the traditional contact hypothesis assumes that prejudice is caused by lack of knowledge or ignorance about the outgroup. Recent writings which try to uphold this view suggest, however, that this is only part of the story and that knowledge about a group and attitudes towards that group are only moderately correlated (see Stephan & Stephan, 1984). Later reviews of the literature were more cautious about the direction of causality implied by the contact hypothesis and clarified the conditions that tend to reduce, as well as increase, prejudice and intergroup conflict (e.g., Allport, 1954; Amir, 1969; Cook, 1984; Hewstone & Brown, 1986). The present chapter aims to investigate the association between self-reported contact involving ethnic groups in a majority and minority context and three criterion variables which are derived from a review of contemporary research on intergroup relations and stereotyping.

Allport emphasized that there was no simple relationship between contact and outgroup evaluation, and he outlined a taxonomy of relevant factors constituting the "nature of contact" (see Allport, 1954/1979, pp. 262-3). These factors can be briefly categorized as follows: (a) quantitative aspects: frequency, duration, number of persons involved and variety of contact; (b) status aspects: what status the group as a whole possesses and whether individual members interact with low, equal or superior status in the contact situations; (c) role aspects: whether contact takes place in a competitive or cooperative atmosphere and whether superordinate or subordinate role relations are involved; (d) social atmosphere surrounding the contact: whether contact is voluntary and intimate,

whether it is perceived in terms of intergroup relations and whether it is regarded as 'typical'; (e) personality of the individual experiencing the contact: level of initial prejudice and how deeply these prejudices are rooted, previous experience with the group, age and general education level and other personality factors; (f) areas of contact: whether contact takes place in residential, occupational, recreational, religious, civic and political contexts etc. Later reviews of the literature clarified the conditions that tend to reduce prejudice, highlighting equal status, disconfirmation of outgroup stereotypes, situations of high 'acquaintance potential', and 'equalitarian social norms' in society (see Amir, 1969). One of the more recent dimensions to receive attention is whether contact between members of two groups is 'interpersonal' or 'intergroup'.

There are several situational variables identified from the empirical studies which proved to be beneficial to intergroup contact. Allport (1954) pointed out that equal-status contact between majority and minority groups is a beneficial factor. Amir (1969) clarified the issue of whether equal status within or outside the specific contact situation was to be considered. Studies suggested that equal status within the contact setting is more important, as it increases the probability of common beliefs being perceived (see Amir, 1969; McClendon, 1974). However, where in social reality a status difference is enormous, manipulation of equal status within the contact setting may not be possible (Riordan, 1978) and if a higher status group is threatened by this manipulation it may produce negative attitudinal change. There is ample evidence from realistic conflict theory that cooperative interactions in the pursuit of common superordinate goals have favourable effects (Sherif, Harvey, White, Hood, & Sherif 1961; Worchel, Andreoli, & Folger, 1977). But the role of each group should be clearly defined (Brown & Wade, 1987). Other studies show that intimate rather than casual and superficial contact (e.g., Cole, Steinberg, &

Burkheimer, 1968), voluntary contact (Wagner, Hewstone & Machleit, 1989; Wagner & Machleit, 1986) and institutional support for mutual contact (Adlerfer, 1982; Cohen, 1980) could produce favourable attitude change. However, there is much evidence suggesting that despite the presence of such favourable conditions, contact failed to achieve any facilitating effect (see Amir, 1976).

Later developments highlighted some specific characteristics of both the person and situation involved (see Cook, 1978). Among them the most important are (a) stereotypic characteristics of outgroup members should be initially perceived as potentially disconfirmable; (b) the contact situation should enable individuals to perceive each other in terms of their individual characteristics, rather than as stereotypical outgroup members. Cook (1970) proposed that experiences with individuals who provide evidence of disconfirmation of the negative stereotype generalize to the group as a whole through the process of 'stimulus generalization'. However, Rothbart and John (1985) and Rothbart and Park (1986) suggested that the process of stereotype change through contact, as suggested, was not straightforward. They (Rothbart & John, 1985, p. 82) proposed three main problems related to this process:

> "(a) stereotype beliefs differ dramatically in their susceptibility to disconfirmation;
>
> (b) intergroup contact may either disconfirm *or* corroborate existing stereotypes, depending upon the nature of the intergroup contact; and
>
> (c) even when contact with individual members does disconfirm the group stereotype, cognitive processes basic to underlying category-exemplar relations may isolate those instances from the group stereotype."

These qualifications directly address not only the specific nature of contact but the complex nature of the processes of stereotype change and generalization of stereotype change to the group as a whole.

The contact hypothesis has recently received criticism for being an interpersonal approach to an intergroup problem. Both interpersonal (Brewer & Miller, 1984) and category-based (Brown & Turner, 1981; Hewstone & Brown, 1986) hypotheses have been derived from social identity theory. This theory suggests that for every individual, category membership is imbued with value and emotional significance. In a situation where category membership is a salient aspect of the contact, social identity is increased, people become 'depersonalized' and respond in terms of their category membership. Evidence also suggests that people tend to show more outgroup derogatory attitudes in such situations. Accordingly, Brewer and Miller (1984, p. 287) advocated an approach to contact which should aim to:

> "promote intergroup acceptance and to reduce the role that category membership plays in creating barriers to individual social mobility and to the development of positive interpersonal relations".

They suggested two related but separate processes so that category-based social interactions may be replaced by social relations that are more interpersonally oriented: (a) increasing *differentiation* which allows promotion of the distinctiveness of individual category members from one another within the category and (b) increasing *personalization* which provides an opportunity for breaking down category boundaries and perceiving and treating outgroup members as individuals, rather than viewing them merely as representatives of a particular social category, which in turn enable them to make self-other interpersonal comparisons across category boundaries. This clearly conveys a picture of an interpersonal approach.

There is some support for this interpersonal position. For example, Miller, Brewer and Edwards (1985) carried out an experiment employing a laboratory analogue of desegregation. In the condition where person-based interactions were promoted, subjects showed less category-based differentiation. However, category boundaries were maintained throughout their experiment which enabled subjects to some extent to perceive group members as typical outgroup members and interact with them accordingly (see Hewstone, 1989; Johnston & Hewstone, 1990).

It is clear from Brewer and Miller's (1984) account that they hold a similar view to that of Stephan and Stephan (1984), that interpersonal similarity should be highlighted in contact situations. This notion is mainly derived from belief-congruence theory (Rokeach, Smith & Evans, 1960), which suggests that individuals prefer other individuals who hold similar beliefs to themself. This view led them to assume that similar outgroups would be preferred to dissimilar outgroups. However, it is not well documented that people who become aware of between-group similarities tend to develop a favourable attitude towards that outgroup. Rosenbaum (1988) provided empirical evidence that at least at the interpersonal level similarity failed to produce attraction, but dissimilarity resulted in repulsion. Recent studies suggest that similar outgroups could be more harshly discriminated against than dissimilar outgroups (see Allen & Wilder, 1975; Diehl, 1990). It is unclear why people would experience similarities where differences are fundamental. Apart from that, social identity theory suggests that people tend to search for psychological distinctiveness for their group and therefore are most likely to look for dissimilarities between groups. Studies suggest they are also sensitive to their distinct group role and boundaries (e.g., Brown & Wade, 1987). Thus, in reality, whether suppressing obvious social, physical and attitudinal differences in an effort to highlight some imposed

similarities would bring any favourable result is doubtful. Perhaps the best notion is to highlight the idea that knowledge and understanding of differences are as important as similarities between groups, in reducing prejudice (see Hewstone & Brown, 1986; Pettigrew, 1986; Stephan & Stephan, 1984).

Tajfel (1978b) suggested, all our social behaviours take place along a continuum with interpersonal and intergroup extremes. As has already been discussed in the review of interpersonal theories in Chapter 2, without highlighting relations at the group level, interpersonal relationships can contribute very little to intergroup situations. Therefore, Hewstone and Brown (1986) argued that to be successful in changing the evaluation of an outgroup, favourable contact with an outgroup member must be defined as an intergroup, rather than an interpersonal, encounter. In addition, they identified the crucial problem in contact to be the failure to generalize individual level experience to the group as a whole, which Cook (1978, 1984) had recognised earlier. Thus, the category-based hypothesis suggests that group categorization should be maintained and that the outcome of contact is more likely to be generalized from person to group when the outgroup member with whom one is interacting is perceived as 'typical' of the outgroup. Supporting evidence for this approach has been provided by studies showing that disconfirming attributes become associated with a group stereotype only if they belong to an individual who is otherwise a good fit to the category (Johnston & Hewstone, in press; Weber & Crocker, 1983; see Rothbart & John, 1985; Rothbart & Lewis, 1986) In the same vein, Wilder (1984) provided evidence of a significant improvement in the evaluation of an outgroup only after having a pleasant encounter with 'typical' but not 'atypical' outgroup members.

Rothbart and John (1985) argued that contact and familiarity do permit a more differentiated knowledge but this very process of individuation may

decrease the possibility of generalizing disconfirming information from the individual to the group, particularly when the individual is perceived as *atypical* of the group. At this point perhaps, it is worthwhile outlining some of the recent developments in cognitive models of stereotype change. Weber and Crocker (1983) provided a clear picture of three existing models of stereotype change in response to negative stereotype-disconfirming information. The 'bookkeeping' model (Rothbart, 1981) proposes a gradual change in stereotypes where changes occur additively with the accumulation of disconfirming information. The 'conversion' model (Rothbart, 1981), on the other hand, proposes a radical change in response to a single, salient piece of disconfirming information. The final model, 'subtyping', suggests that where the disconfirming information is concentrated in only a few individuals, they may be separated from the group and viewed as a subcategory within the original category.

As Weber and Crocker (1983) showed, subtyping model receives the strongest empirical support, and may characterise real intergroup settings when negative stereotype-disconfirming information is concentrated in few outgroup members. In fact subtyping has very little favourable impact on changing negative stereotypes; rather, it maintains the stereotype by dividing a category into distinct components (see Taylor, 1981; Rothbart & John, 1985; but see Pettigrew, 1981 for a contrary view)[1]. Presumably interaction with few atypical members results in subtyping and therefore makes generalization difficult. One possible way to view the outgroup as a whole and overcome this subtyping tendency is to highlight the desired differences between groups. This allows people to interact in terms of their group identity and as a group representatives (i.e., typical members of the group), rather than by their individual characteristics, so that

disconfirming behaviour generated from outgroup members cannot be easily dismissed by considering them exceptions to the group stereotype (see Hewstone, 1989).

That typicality is important for generalizing from a target outgroup member to the outgroup as a whole makes sense. In her work entitled "a dual process model of impression formation" Brewer (1988) recently proposed that both group and individual processing are important for group impression formation. Further, she acknowledged that the "decategorization" implied by personalization reduces the probability that experiences with that individual will be generalized to more inclusive social categories. Yet, we can also see that intergroup encounters may overemphasize intergroup differences, accentuate the salience of social categorization, and impede positive contact. As Wilder (1986b) pointed out, if stereotypes are negative, then a "typical" outgroup member may need to have some negative characteristics. Pointing out one problem with Hewstone and Brown's (1986) typicality-generalizability hypothesis, Horwitz and Rabbie (1989, p. 119) raised the question of:

> "...how the development of cordial relationships can be expected even to begin if each individual perceives the other to exemplify the negative traits that are characteristic of the other's social category".

This paradox is explored in the present study by including among predictors ratings of whether contact targets were seen as individuals or group members, and as typical outgroup members, and whether contact made respondents aware of intergroup similarities and differences.

Whereas the first phase of contact research focused on situational dimensions, more recent work has involved detailed analysis of the cognitive processes involved in stereotyping and, belatedly, the affective nature of intergroup contact. Rothbart and John's (1985) cognitive analysis emphasizes

that objects differ in the degree to which they are viewed as prototypical examples of a category. This insight is linked to a new conception of stereotypes and, it can be argued, a new criterion variable that should be associated with contact. Linville, Salovey and Fischer (1986) have argued that category differentiation, and not mere perceptions of central tendencies, should be at the heart of the stereotype concept. Further, greater category familiarity (e.g., contact) should be associated with greater category differentiation (the tendency to perceive many types within a given category, and to be likely to distinguish among category members).

This is still a paradox, as it is unclear whether it would be desirable to perceive the outgroup as homogeneous or heterogeneous. Wilder (1984) suggested a functional purpose to perceiving the outgroup as homogeneous, since it justifies treating the whole group in a negative manner, considering it as a depersonalised entity. On the other hand, Rothbart and John (1985) suggested that this perceived homogeneity would facilitate generalization of disconfirming attributes from a target to the group as a whole (see Hewstone, Johnston & Aird, in press). However, it is also possible that generalization of negative stereotype confirming information from target to group would be easier for outgroup than ingroup if the outgroup is viewed as more homogeneous (Quattrone & Jones, 1980). Research evidence does not clearly support either favourable or unfavourable effects of perceived variability on overall attitude or evaluation towards outgroup. It rather suggests that the whole framework is complexly structured and therefore needs further investigation.

Research incorporating measures of perceived variability within in- and outgroups has identified a consistent tendency to view ingroups as more variable than outgroups (see Linville et al., 1986; Park & Judd, 1990; Park, Judd & Ryan, 1991; Quattrone, 1986), with the exception of members of a minority viewing the

ingroup and an outgroup majority (Simon & Brown, 1987). This is an important "qualification" in real intergroup situations, which are likely to involve minority *vs* majority groups (see discussion in Chapter 4)

One possible source of the "outgroup homogeneity effect" might be greater familiarity with in- than outgroups (Linville et al., 1986). Although this explanation makes intuitive sense, Linville, Fischer and Salovey, (1989) and Park et al. (1991) have argued that familiarity does not appear to provide a complete account of differences in perceived variability between ingroups and outgroups. Differences in familiarity may be sufficient to produce perceived outgroup homogeneity, but they are not necessary. This is evident from research which has found no relationship between the magnitude of the outgroup homogeneity effect and differences in either reported familiarity with in- and outgroups, or the number of known outgroup members (Jones, Wood & Quattrone, 1981). The outgroup homogeneity effect has also been found when differences in familiarity would be expected to be low (e.g., using male and female target groups; Park & Rothbart, 1982), or even nonexistent (e.g., minimal groups; Judd & Park, 1988). A number of other studies suggesting a link between familiarity and perceived variability failed to include a measure of familiarity (e.g., Linville et al., 1989), with which internal analyses could be conducted to examine, for example, whether individual changes in familiarity were related to changes in perceived variability (see Park, Judd & Ryan, 1991).

Although there are good reasons for relating contact to perceived outgroup variability, there are multiple measures of variability from which to choose (ten are identified by Linville et al., 1986; Park & Judd, 1990; Quattrone, 1986). Quattrone (1986) distinguished, conceptually, between three measures of variability: dimensional, taxonomic, and general. Dimensional variability refers to the psychological dimensions that people employ to perceive the social world

(e.g., aggression). Taxonomic variability refers to the extent to which dimensional attributes are believed to covary. As Quattrone suggests, in general, the greater the covariation perceived among attributes, the lower the perception of variability. General variability refers to a general perception of groups as complete entities. In general, most of the recent studies deal with the concept of dimensional variability.

Park and Judd (1990) examined intercorrelations between all the available measures of perceived variability, which clustered into two, relatively orthogonal groups. The first set of measures all related to the perceived dispersion of the groups about their central tendency; measures included estimates of the range of the group, estimates of the standard deviation of the group using a distribution task and a global judgment of how similar the group members were to one another. The second set of measures all concerned subjects' perceptions of the extent to which members of the group fit or conform with the group stereotype. In this study only the first set of measures was employed on as these have been more widely used and because of our interest in the prototype analysis of intergroup contact which encompasses the idea that group members are *dispersed* around a prototype (see Rothbart & John, 1985). The hypothesis that contact would be associated with an increase in perceived outgroup variability was tested using subjects' self-reports of the nature and quantity of contact, in relation to dimensional variability. The range measure was selected (e.g., Jones, Wood, & Quattrone, 1981), because Park and Judd (1990) identified it as one of the least error-prone of the dispersion measures, and therefore more likely to reveal small differences in how groups perceive each other. A global judgment of similarity (e.g., Quattrone & Jones, 1980) was also included, to provide a simple, direct measure of variability of the outgroup as a whole.

As a complement to the purely cognitive analyses of contact, Stephan and Stephan (1985) have pointed out that contact may be fraught with potent affective responses. Although anxiety, as a basic emotional component of intergroup encounters, was underlined quite a long time ago (e.g., Park, 1928; cited in Dijker, 1989), very few studies have looked at the role of such affective factors within the contact situation. There are many instances where physiological measures and self-reports have both shown the expressive signs of anxiety in intergroup interactions of varying sorts (see Ickes, 1984; Isen, 1987). Stephan and Stephan (1985) proposed that "intergroup anxiety" stems mainly from the anticipation of negative consequences for oneself during contact. These feared consequences include psychological (e.g., embarrassment, threat to group identity) and behavioural (e.g., fear of being exploited or dominated) consequences, as well as apprehensions about how one will be evaluated by members of both outgroup (e.g., with scorn or ridicule) and ingroup (e.g., with disapproval). Some of the major antecedents of intergroup anxiety may be minimal previous contact with the outgroup, the existence of large status differentials, and a high ratio of outgroup to ingroup members. Stephan and Stephan's own study of Hispanic Americans' perceptions of Anglos showed that high voluntary contact was negatively associated, and that high believed dissimilarity and stereotyping were positively associated, with intergroup anxiety. It can therefore be predicted that increased contact (under appropriate conditions) would be associated with decreased intergroup anxiety and that, in the realistic context of this realistic study of minority and majority ethnic groups, intergroup anxiety would be higher for minority group members.

Stephan and Stephan also outlined a variety of behavioural and cognitive consequences of intergroup anxiety which may affect intergroup contact. They pointed out behavioural consequences with reference to drive theory (Hull,

1951), which suggests normative responses are exaggerated by anxiety. Avoidance is one such dominant response, which causes people to avoid interaction where possible and make contacts minimal where they cannot be avoided. As cognitive consequences they underlined information-processing biases: a narrowed focus of attention (Easterbrook, 1959; Kahneman, 1973), and an increase in simplified, schematic, expectancy-confirming processing (Schank & Abelson, 1977; Markus & Sentis, 1982). As Wilder and Shapiro (1988) have highlighted, the expectation of an unpleasant competitive encounter with an outgroup generates anxiety and as a result decreases the impact of positive behaviour by outgroup members. Thus, it can be assumed that these biases should mitigate against the impact of any stereotype-disconfirming information encountered during contact and few positive changes in schemata are likely, then, to take place under conditions of high anxiety. It can therefore also be predicted, that intergroup anxiety would be negatively associated with outgroup evaluations and perceived outgroup variability, which in turn reduce differentiation among outgroup members and help to justify any biased evaluation of the group as a whole.

Thus the reported study investigated dimensions of intergroup contact as predictors of outgroup attitude, perceived outgroup variability, and intergroup anxiety. The research was carried out in Bangladesh, a country of 110 million people, with a majority of Muslims (86 per cent of the population) and a sizeable minority of Hindus (12%). There is a considerable degree of contact in everyday life between Hindus and Muslims in this multicultural society. This country provided, then, a unique, realistic context in which to test above discussed extensions of the contact hypothesis.

## 3.2 METHOD (STUDY 3.1)

### 3.2.1 Subjects

Sixty-five Hindu (52 male and 13 female) and sixty-six Muslim (45 male and 21 female) students participated in this study. The mean age of Hindu subjects was 23.06 (SD = 1.84) and for Muslim subjects was 22.14 (SD = 1.56) years. Students were undergraduates at the University of Rajshahi, Bangladesh.

### 3.2.2 Questionnaire

A detailed, back-translated questionnaire in Bengali contained the predictor variables (perceived dimensions of contact), three criterion variables (attitude toward outgroup, perceived outgroup variability, and intergroup anxiety), and some supplementary questions.

Predictor variables: These questions were organised around three categories of contact. All responses were measured on 7-point bipolar scales, unless otherwise noted. With all questions the relevant outgroup (Hindu or Muslim) was always specified by name, without using the term outgroup. Subjects were asked to respond with reference to the typical everyday contact situation, as they experienced it.

(1) Quantitative aspects of contact. Five questions assessed "amount of contact with the outgroup" in different contexts: (a) at college and university; (b) as neighbours; (c) as close friends. The end points for these three questions were marked as none at all (1); and a great deal (7). The last two questions of this section were (d) frequency of informal talks with the outgroup they usually have in everyday life (not at all (1); very often (7)) and (e) frequency of visits to an outgroup home (never (1); very often (7)).

(2) Role / status aspects and social atmosphere surrounding contact. Five questions were presented in this section to assess the role, status and situational aspects of contact:

(a) Contact perceived as equal (definitely not(1); definitely yes (7)). Subjects were asked when they came into contact with the outgroup whether they perceived that they interacted together with equal social status within the contact settings.

(b) Contact perceived as involuntary or voluntary (definitely involuntary (1); definitely voluntary (7)). Subjects were asked whether their contact with the outgroup in general was voluntary or involuntary.

(c) Contact perceived as superficial or intimate (very superficial (1); very intimate (7)). Subjects were asked whether the contact they have had with the outgroup was in general intimate in nature or only superficial.

(d) Contact experienced as pleasant (not at all (1); very much (7)). Subjects were asked whether the contact experience in general was pleasant and enjoyable.

(e) Contact experienced as competitive or cooperative (very competitive (1); very cooperative (7)). Subjects were asked whether the contact they have had was in general experienced as cooperative or competitive.

(3) Interpersonal/Intergroup aspect of contact. Four questions were included in this section.

(a) Contact regarded as having an interpersonal or intergroup basis (as individual (1); as group members (7)); Subjects were asked when they came into contact with members of the outgroup, did they feel they met as individuals or rather as members of their representative ethnic groups (Hindu/Muslim).

(b) Whether outgroup members were perceived as typical (not at all typical (1); very typical (7)). Subjects were asked whether they saw the outgroup members with whom they had contact as typical outgroup members.

(c) Awareness of similarities (not at all (1); very much (7)). Subjects were asked whether when they come into contact, they felt aware of similarities between the groups.

(d) Awareness of differences (not at all (1); very much (7)). Subjects were asked whether, when they come into contact, they felt aware of differences between the groups.

Criterion variables. Three criterion variables were assessed.

(a) Attitude toward outgroup (strongly negative (1); strongly positive (7)). Respondents marked on a single scale their "overall attitude towards the outgroup". Every point of this seven point scale was precisely noted. The following wording was used: strongly negative (1); moderately negative (2); slightly negative (3); neutral or undecided (4); slightly positive (5); moderately positive (6) and strongly positive (7). A pilot study had shown that this single-item criterion was significantly correlated with a highly reliable measure employing 12 evaluative adjectives ($r(50) = .374, p < .01$ for Hindus; $r(50) = .357$, $p < .01$ for Muslims). The single-item measure was used to shorten the questionnaire.

(b) Perceived outgroup variability. Eight seven point bipolar scales with four positive traits (hospitable, intelligent, patriotic and cool-headed) and four negative (aggressive, conservative, selfish and deceitful) were provided for measuring outgroup variability. Scales were anchored with the end-points "not at all" (1) and "extremely" (7). These traits were chosen because the pilot study had shown that they were not assigned stereotypically to one specific religious group. Respondents were asked to rate where on average, on each of eight dimensions,

the outgroup fell. On the same scale, respondents then indicated where the most extreme members would fall, that is, they were asked where would the highest and the lowest scorer on the trait be. The differences between the rated extremes (full range) was calculated on each dimension. In addition to this, respondents were also asked to rate the outgroup on a direct measure of global intragroup similarity. This scale was anchored with the end-points "completely different from one another" (1); and "pretty much alike" (7).

(c) Intergroup anxiety. Intergroup anxiety was measured by Stephan and Stephan's (1985) intergroup anxiety scale. Respondents were asked, "If you were the only member of your religious group and you were interacting with people from another religious [Hindu or Muslim] group (e.g., talking with them, working on a project with them, travelling with them), how would you feel compared to occasions when you are interacting with people from your own religious [Hindu or Muslim] group?" Respondents marked on 7-point scales whether they would feel more or less awkward, self-conscious, happy, accepted, confident, irritated, impatient, defensive, suspicious and careful. All of these scales were anchored with the end-points "not at all" (1), and "very much" (7). One item was dropped from the original scale ("certain") because it could not be translated precisely in Bengali.

Supplementary question. One supplementary question was asked concerning the relative numbers of ingroup and outgroup members present in daily life intergroup contact situations. Possible answers were: a single outgroup member and me; several outgroup members and me as a sole ingroup member; a single outgroup member and several ingroup members; several ingroup and outgroup members.

### 3.2.3 Procedure

First lists of residents in all large student halls were collected. Three of these halls were selected (including one all female hall) in which to carry out the study because, although Hindu students were in the minority, they composed more than 12 per cent of total students at these halls of residence, therefore the data should have been highly comparable among these halls. This was needed for another reason, as in carrying out the pilot study it was reported by research assistants that where Hindu students were less then 5 percent of total student population in a hall of residence they expressed unwillingness to take part in such a survey.

A sample of 70 students from each religious group was selected, employing a simple randomization technique. In this culture students' religious group can easily be identified by their name. More than 95 per cent of Muslim students use Arabic names. Hindu students use either Bengali or Sanskrit names. Questionnaires were distributed to students individually in their dormitories by a research assistant of their own ethnic group and these were collected within the hour. Students were particularly told that we were only interested in their own opinion, and therefore not to discuss the questionnaire with other students.

All questionnaires were anonymous. On returning subjects themselves placed their own completed questionnaires into a pile of questionnaires allegedly completed previously. Further, respondents were told beforehand that data were being collected from other universities simultaneously, so that they would not think that they were the only respondents. The pilot study had shown that Hindus, particularly, felt suspicious if they thought they had been specially selected. Five Hindu (7%) and four Muslim (6%) students returned blank questionnaires and therefore these were regarded as totally missing questionnaires and excluded from all analysis.

## 3.3 RESULTS

### 3.3.1 Overview

To provide background information about the context of Hindu-Muslim relations in Bangladesh, first the mean responses of the two groups on all the variables were compared. There were no differences as a function of respondents' sex, so the data are collapsed across this variable (see Appendix D). Then three multiple regressions were computed in which each criterion (outgroup attitude, perceived outgroup variability, and intergroup anxiety) was regressed onto the contact dimensions as predictors.

### 3.3.2 Hindu-Muslim comparisons

Before computing comparisons, three composite measures were created to provide a more reliable picture. A preliminary factor analysis on all the predictor variables for both groups showed that the five items measuring amount of contact (in college, as neighbours, as close friends, informal talks and visits in the outgroup home) loaded mainly onto one factor (see Appendix D). These items yielded a measure of "amount of contact with outgroup" (Cronbach's alphas = .897 and .822 for Hindus and Muslims, respectively).

A factor analysis on the eight range ratings (variability measures) on evaluative traits revealed one unrotated factor which had a large eigenvalue for each group (4.25 and 3.85, for Hindus and Muslims respectively) and accounted for a high percentage of variance (53% and 48%) with the factor loadings higher than .67 and .61 for Hindus and Muslims respectively. These ratings yielded an index of perceived outgroup variability (alphas = .870 and .837 for Hindus and Muslims, respectively).

For the 10-item intergroup anxiety scale responses to three items (happy, accepted and confident) were recoded so that high scores indicate high anxiety

and this also yielded a reliable index (alphas = .858 and .774 for Hindus and Muslims respectively).

Rather than a multivariate analysis, separate univariate analyses of variance (ANOVAs) on each specific dimension were conducted, as it was thought this would provide a clear picture of the nature of contact between the two groups. However, a stricter criterion of significance ($p < .01$) was adopted to protect against Type I errors (see Huberty & Morris, 1989). Mean ratings of Hindus and Muslims were compared using one-way ANOVAs. The means, standard deviations, and ANOVA details for all predictors and criterion variables are shown in Table 3.1. As can be seen from the standard deviation columns, neither predictor nor criterion variables differed in variability between groups.

Predictor variables. There were significant differences between the ratings of Hindu and Muslim respondents within each of the three broad categories of contact assessed. As expected, members of the Hindu minority group ($M = 4.99$) reported more outgroup contact than did members of the Muslim majority ($M = 4.14$; $F(1,129) = 9.38, p < .003$). The Hindus ($M = 4.25$) reported the contact experience as less pleasant than did Muslims ($M = 5.17$; $F(1,129) = 7.63, p < .007$). They ($M = 4.52$) also perceived the contact situation as less equal than did Muslims ($M = 6.17$; $F(1,129) = 21.65, p < .0001$). And Hindus ($M = 5.18$) reported they were more aware of intergroup differences during the contact than were Muslims ($M = 4.20$; $F(1,129) = 8.24, p < .005$).

Criterion variables. One significant difference was found. As expected, Hindus ($M = 4.77$) reported greater intergroup anxiety than did Muslims ($M = 3.07$; $F(1,129) = 30.20, p < .0001$). Neither the full-range measure of perceived outgroup variability (see Table 3.1) nor the direct measure of perceived outgroup similarity ($M = 5.40$, SD = 1.79 vs. $M = 5.00$, SD = 1.26; $F(1,129) = 2.27$, *n.s.*) revealed differences between the groups.

Table 3.1 Mean Ratings on Predictor and Criterion Variables for Hindu and Muslim Respondents

| | Ethnic Group of Respondent | | | | |
|---|---|---|---|---|---|
| | **Hindu (Minority)** | | **Muslim (Majority)** | | |
| **Variables** | M | SD | M | SD | F(1,129) |
| **Predictor variables** | | | | | |
| **Quantitative aspects of contact:** | | | | | |
| Amount of contact with outgroup | 4.99 | 1.68 | 4.14 | 1.48 | 9.38 * |
| **Role/status aspects and social atmosphere surrounding contact:** | | | | | |
| Contact situation perceived as equal | 4.52 | 2.42 | 6.19 | 1.63 | 21.65 * |
| Contact involuntary or voluntary | 5.36 | 2.02 | 5.60 | 1.73 | < 1 |
| Contact superficial or intimate | 4.40 | 2.41 | 4.92 | 1.96 | 1.87 |
| Contact experienced as pleasant | 4.25 | 2.26 | 5.17 | 1.47 | 7.63 * |
| Contact competitive or cooperative | 4.18 | 2.42 | 4.93 | 1.72 | 4.25 |
| **Interpersonal/intergroup aspects of Contact:** | | | | | |
| Contact seen in terms of individuals or group members | 2.29 | 1.90 | 2.36 | 2.01 | < 1 |
| Outgroup members seen as typical | 5.03 | 1.72 | 4.36 | 1.96 | 4.26 |
| Awareness of similarities | 4.34 | 1.94 | 4.01 | 1.92 | < 1 |
| Awareness of differences | 5.18 | 1.72 | 4.20 | 2.18 | 8.24 * |
| **Criterion variables** | | | | | |
| Outgroup attitude | 3.38 | 1.79 | 4.07 | 1.25 | 6.55 [a] |
| Perceived outgroup variability | 3.38 | 0.81 | 3.18 | 0.73 | 2.25 |
| Perceived outgroup similarity | 5.40 | 1.79 | 5.00 | 1.26 | 2.27 |
| Intergroup anxiety | 4.77 | 1.16 | 3.07 | 1.05 | 30.20 * |

Note Alpha level = $p$ <.01(*); [a] $p$ <.015.

The direct measure was included only in case respondents had difficulties with the full-range measure; as the measures were significantly correlated for

both groups ($r(131) = -.431, p < .0001$ for the entire sample; $r(65) = -.533$, $p < .0001$ for Hindus; $r(66) = -.383$, $p < .01$ for Muslims), this direct measure was dropped from further analyses. These significant correlations are consistent with Park and Judd's (1990) finding that both the range measure of perceived outgroup variability and the global measure of homogeneity tap the same underlying construct (perceived dispersion of the group about its central tendency).

Comparison of attitude towards the outgroup was marginally significant; Hindus ($M = 3.38$) expressed a slightly more negative attitude towards the outgroup than Muslims ($M = 4.07; F(1,129) = 6.55, p < .012$).

Supplementary question. When reporting the respective numbers of ingroup and outgroup members present during contact, Hindus were less likely than Muslims to report contact involving "a single outgroup member and me" (frequencies: 9 vs 18), or "a single outgroup member and several ingroup members" (6 vs 32), and more likely to report that contact involved "several outgroup members and me as a sole ingroup member" (40 vs 4). The groups were equally likely to report contact involving "several outgroup and ingroup members" (10 vs 12). A 2 x 4 Chi-square analysis revealed a significant association between ethnic group of respondent and number of ingroup and outgroup members involved in contact situations ($X^2(3) = 50.42, p < .0001$).

Correlations. The full set of correlations among predictor variables are shown for the entire sample in Table 3.2 and separately for each group in Tables 3.3 and 3.4. Before considering the results of regression analyses, it is important to note that there are few significant relationships between the predictors for either group. It can be seen, however, that the relationships between predictors are more prominent for Hindus than for Muslims.

Correlations among criterion variables are shown in Table 3.5. Intercorrelations among predictor and criterion variables are presented in Tables 3.6 and 3.7. At this point it is useful to provide an overview of relationships between criterion and predictor variables for each group. As can be seen for Hindus, the overall attitude towards the outgroup is significantly positively correlated with predictor variables like amount of contact, equal status contact, voluntary contact, intimate contact, pleasant contact and cooperative contact but negatively correlated with typicality and awareness of differences. The same criterion for Muslims was positively correlated with predictors like equal status contact, intimate contact and pleasant contact; however, none of the predictors was found to have a significant negative association.

For Hindus perceived outgroup variability was positively correlated with amount of contact, intimate contact and pleasant contact but negatively correlated with typicality and awareness of differences. For Muslims, the correlational pattern for this criterion was very similar; amount of contact, voluntary contact, intimate contact, pleasant contact and cooperative contact show a positive association and typicality and awareness of differences show a negative association with perceived outgroup variability.

Intergroup anxiety displays a significant positive association with contact as group members and typicality but a negative association with several predictors such as amount of contact, equal status contact, voluntary contact, intimate contact, pleasant contact and cooperative contact for Hindus. For Muslims the correlation pattern was again comparable; the same two predictors as Hindus, that is, contact as group members and typicality, revealed significant positive associations. A negative association was found with predictors like amount of contact, voluntary contact, intimate contact, pleasant contact and cooperative contact.

Table 3.2 Intercorrelations among Predictor Variables for the Entire Sample (n = 131)

| | Amount of contact | Equal status | Voluntary contact | Intimate contact | Pleasant contact | Cooperative contact | Contact as individuals | Typicality | Awareness of similarities | Awareness of differences |
|---|---|---|---|---|---|---|---|---|---|---|
| **Amount of contact** | – | | | | | | | | | |
| **Equal status contact** | .041 | – | | | | | | | | |
| **Voluntary contact** | .58 c | .29 b | – | | | | | | | |
| **Intimate contact** | .49 c | .37 c | .61 c | – | | | | | | |
| **Pleasant contact** | .33 c | .51 c | .52 c | .51 c | – | | | | | |
| **Cooperative contact** | .30 b | .38 c | .34 c | .56 c | .47 c | – | | | | |
| **Contact as individuals** | -.16 | -.21 a | -.23 b | -.24 b | -.14 | -.10 | – | | | |
| **Typicality** | -.24 b | -.33 c | -.28 b | -.43 c | -.38 c | -.29 b | .39 c | – | | |
| **Awareness of similarities** | .09 | -.08 | .03 | -.00 | -.03 | -.07 | .18 a | .12 | – | |
| **Awareness of differences** | -.22 a | -.15 | -.27 b | -.40 c | -.35 c | -.35 c | .18 a | .43 c | .21 a | – |

Note: $n$ = 131; [a] $p < .05$, [b] $p < .01$, [c] $p < .001$.

Table 3.3 Intercorrelations among Predictor Variables for Hindu Sample

| | Amount of contact | Equal status | Voluntary contact | Intimate contact | Pleasant contact | Cooperative contact | Contact as individuals | Typicality | Awareness of similarities | Awareness of differences |
|---|---|---|---|---|---|---|---|---|---|---|
| **Amount of contact** | – | | | | | | | | | |
| **Equal status contact** | .21 | – | | | | | | | | |
| **Voluntary contact** | .62 c | .37 b | – | | | | | | | |
| **Intimate contact** | .47 c | .41 c | .61 c | – | | | | | | |
| **Pleasant contact** | .47 c | .56 c | .60 c | .57 c | – | | | | | |
| **Cooperative contact** | .29 a | .35 b | .38 b | .53 c | .52 c | – | | | | |
| **Contact as individuals** | -.34 b | -.30 a | -.43 c | -.31 a | -.35 b | -.14 | – | | | |
| **Typicality** | -.36 b | -.53 c | -.42 c | -.49 c | -.57 c | -.31 a | .37 b | – | | |
| **Awareness of similarities** | .05 | -.03 | .09 | .14 | -.08 | -.07 | .03 | .01 | – | |
| **Awareness of differences** | -.35 b | -.08 | -.24 | -.38 b | -.40 c | -.35 b | .20 | .41 c | .08 | – |

Note: $n = 65$; $^{a}p < .05$, $^{b}p < .01$, $^{c}p < .001$.

Table 3.4 Intercorrelations among Predictor Variables for Muslim Sample

| | Amount of contact | Equal status | Voluntary contact | Intimate contact | Pleasant contact | Cooperative contact | Contact as individuals | Typicality | Awareness of similarities | Awareness of differences |
|---|---|---|---|---|---|---|---|---|---|---|
| **Amount of contact** | – | | | | | | | | | |
| **Equal status contact** | .08 | – | | | | | | | | |
| **Voluntary contact** | .61 c | .15 | – | | | | | | | |
| **Intimate contact** | .64 c | .26 a | .61 c | – | | | | | | |
| **Pleasant contact** | .34 b | .26 a | .39 b | .38 b | – | | | | | |
| **Cooperative contact** | .47 c | .33 b | .27 a | .58 c | .29 a | – | | | | |
| **Contact as individuals** | .02 | -.18 | -.02 | -.17 | .11 | -.05 | – | | | |
| **Typicality** | -.25 a | -.03 | -.14 | -.35 b | -.09 | -.22 | .42 c | | | |
| **Awareness of similarities** | .10 | -.10 | -.04 | -.15 | .09 | -.04 | .33 b | .18 | – | |
| **Awareness of differences** | -.26 a | -.05 | -.30 a | -.41 c | -.23 | -.34 b | .19 | .40 c | .29 a | – |

Note: $n = 66$; [a] $p < .05$, [b] $p < .01$, [c] $p < .001$.

Table 3.5 Intercorrelations Among Criterion Variables.

| | ENTIRE SAMPLE (N = 131) | | | HINDU SAMPLE (N = 65) | | | MUSLIM SAMPLE (N = 66) | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Outgroup attitude** | **Perceived variability** | **Perceived homogeneity** | **Outgroup attitude** | **Perceived variability** | **Perceived homogeneity** | **Outgroup attitude** | **Perceived variability** | **Perceived homogeneity** |
| **Perceived variability** | .18 a | | | .27 a | | | .13 | | |
| **Perceived homogeneity** | -.23 b | -.43 c | | -.20 | -.53 c | | -.21 | -.38 b | |
| **Intergroup anxiety** | -.45 c | -.45 c | .38 c | -.47 c | -.63 c | .59 c | -.31 a | -.49 c | .12 |

Note. $^{a}p < .05$, $^{b}p < .01$, $^{c}p < .001$.

Table 3.6 Intercorrelations Among Predictor and Criterion Variables for the Entire Sample (n = 131)

| | **Amount of contact** | **Equal status** | **Voluntary contact** | **Intimate contact** | **Pleasant contact** | **Cooperative contact** | **Contact as individuals** | **Typicality** | **Awareness of similarities** | **Awareness of differences** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Outgroup attitude** | .27 b | .45 c | .26 b | .45 c | .60 c | .42 c | -.07 | -.29 b | -.01 | -.29 b |
| **Intergroup anxiety** | -.33 c | -.42 c | -.43 c | -.46 c | -.51 c | -.41 c | .20 a | .54 c | .02 | .46 c |
| **Perceived variability** | .58 c | .02 | .28 a | .30 b | .26 b | .14 | -.15 | -.38 c | .12 | -.25 b |
| **Perceived homogeneity** | -.28 b | -.23 b | -.28 b | -.31 c | -.34 c | -.18 a | .14 | .28 b | -.05 | .15 |

Note. $n = 131$, $^{a}p < .05$, $^{b}p < .01$, $^{c}p < .001$.

Table 3.7 Intercorrelations Among Predictor and Criterion Variables for Hindu and Muslim Sample

| | Amount of contact | Equal status | Voluntary contact | Intimate contact | Pleasant contact | Cooperative contact | Contact as individuals | Typicality | Awareness of similarities | Awareness of differences |
|---|---|---|---|---|---|---|---|---|---|---|
| **Hindu Sample:** | | | | | | | | | | |
| **Outgroup attitude** | .49 c | .48 c | .36 b | .50 c | .70 c | .53 c | .-17 | -.47 c | -.07 | -.37 b |
| **Intergroup anxiety** | -.61 c | -.47 c | -.53 c | -.47 c | -.57 c | -.39 b | .33 b | .65 c | .03 | .36 b |
| **Perceived variability** | .58 c | .08 | .23 | .25 a | .27 a | .06 | -.19 | -.42 c | .01 | -.26 a |
| **Perceived homogeneity** | -.40 c | -.29 a | -.40 c | -.31 a | -.35 b | -.17 | .28 a | .44 c | -.04 | .24 |
| **Muslim Sample:** | | | | | | | | | | |
| **Outgroup attitude** | .14 | .26 a | .08 | .33 b | .31 a | .14 | .04 | -.02 | .10 | -.15 |
| **Intergroup anxiety** | -.39 b | -.05 | -.34 b | -.44 c | -.32 b | -.35 b | .14 | .42 c | -.08 | .46 c |
| **Perceived variability** | .56 c | .08 | .36 b | .41 c | .36 b | .34 b | -.12 | -.41 c | .23 | -.33 b |
| **Perceived homogeneity** | -.25 a | -.07 | -.13 | -.29 a | -.30 a | -.14 | .01 | .13 | -.08 | .05 |

Note. Hindu: $n = 65$, Muslim: $n = 66$; $^{a}p < .05$, $^{b}p < .01$, $^{c}p < .001$.

In addition, the correlations among the three criterion measures are informative. As predicted, outgroup attitude and intergroup anxiety were significantly negatively correlated ($r(131) = -.451, p < .001$ for the entire sample; $r(65) = -.471, p < .001$ for Hindus; $r(66) = -.310, p < .011$ for Muslims), as were intergroup anxiety and perceived outgroup variability ($r(131) = -.449, p < .001$ for the entire sample; $r(65) = -.634, p < .001$ for Hindus; $r(66) = -.488, p < .001$ for Muslims). The correlation between outgroup attitude and perceived outgroup variability was positive, but was not significant for the Muslims ($r(131) = .177$, $p < .05$ for the entire sample; $r(65) = .270, p < .03$ for Hindus; $r(66) = .131$, *n.s.* for Muslims).

### 3.3.3 Multiple regression analyses

To assess how perceived dimensions of contact related to the three criterion variables, three separate multiple regression analyses, using the stepwise forward estimation model in SPSSx were conducted (see Hair, Anderson & Tatham, 1987, p. 41). The equation was selected in which $R^2$ was maximized, as long as the beta coefficient of each individual predictor in the equation was significant. Thus, the final step included resulted in a significant change in $F$. However, as in some cases predictors in this study were intercorrelated, it is noted that in these cases selection of predictors could be highly arbitrary in a stepwise regression procedure. For example, if two predictors are highly correlated with each other, as well as with the criterion variable, it is possible that any of these predictors will be selected for inclusion whereas the other variable will not because its contribution is captured by the variable already in the equation. To check that the results were not a function of this specific regression procedure, additional analyses for each criterion, using the forced entry method (where all ten predictors were entered simultaneously) were also conducted. This cross-

validation suggests the pattern of results was highly similar, the same key variables emerging as significant predictors in both types of analyses (see statistical Appendix D).

It was anticipated that the regression analyses for Hindus and Muslims would be different, because of their unequal positions in society, so in addition to regression analysis for the entire sample (where religious group of subject was included as a dummy variable), their data were analysed separately. Each of the three criterion variables (outgroup attitude, perceived variability and intergroup anxiety) was regressed onto ten predictor variables (amount of contact, equal status contact, voluntary contact, intimate contact, pleasant contact, cooperative contact, contact as individuals, typicality, awareness of similarities, and awareness of differences).

Outgroup attitude. The results of regression analyses of outgroup attitude on dimensions of contact are shown in Table 3.8. The regression analysis for the entire sample showed the positive nature of contact, with pleasantness ($\beta$ = .429, $F$ = 24.55, $p$ <.0001), equal status ($\beta$ = .170, $F$ = 4.47, $p$ <.037) and intimate contact ($\beta$ = .167, $F$ = 4.36, $p$ <.039) important predictors. These three predictors altogether accounted for 41 per cent of the variance.

Regression analyses yielded very different results for the two groups. For the Hindus, pleasant contact with the outgroup ($\beta$ = .508, $F$ = 22.33, $p$ <.001) was the best predictor of their attitude towards Muslims, accounting for 50 per cent of the variance. Amount of outgroup contact ($\beta$ = .211, $F$ = 4.51, $p$ <.04) and contact perceived as cooperative ($\beta$ = .187, $F$ = 3.76, $p$ <.05) both made a significant contribution, accounting for 4 and 3 per cent of the variance, respectively. Thus, three variables altogether explained 56 per cent of the variance in outgroup attitudes. For the Muslims, in contrast, this criterion was

poorly predicted. The only significant predictor was intimate outgroup contact ($\beta$ = .327, $F$ = 7.64, $p$ <.008), which explained 11 per cent of the variance.

Table 3.8 Regression of Outgroup Attitude on Contact[1]

| Step No. | Predictor variables | Multiple $R^2$ value | $R^2$ change | Beta | F |
|---|---|---|---|---|---|
| **Entire Sample:** | | | | | |
| 1. | Pleasant contact with outgroup | .361 | ___ | .429 | 24.55 [c] |
| 2. | Equal status contact with outgroup | .389 | .028 | .170 | 4.47 [a] |
| 3. | Intimate contact with outgroup | .409 | .020 | .167 | 4.36 [a] |
| **Hindu Sample:** | | | | | |
| 1. | Pleasant contact with outgroup | .496 | ___ | .508 | 22.33 [c] |
| 2. | Cooperative contact with outgroup | .533 | .037 | .211 | 4.51 [a] |
| 3. | Amount of contact with outgroup | .560 | .027 | .187 | 3.76 [a] |
| **Muslim Sample:** | | | | | |
| 1. | Intimate contact with outgroup | .107 | ___ | .327 | 7.64 [b] |

Note. $F(3,127)$ = 29.28, $p$ <.0001 for entire sample; $F(3,61)$ = 25.89, $p$ <.0001 for Hindu sample; $F(1,64)$ = 7.64, $p$ <.01 for Muslim sample.

[a] $p$ <.05, [b] $p$ <.01, [c] $p$ <.001.

[1] Reported beta weights and $F$ values refer to that predictor on the last step.

Perceived outgroup variability. The regression of perceived outgroup variability on contact for the entire sample illustrated that amount of contact ($\beta$ = .519, $F$ = 54.20, $p$ <.0001) and whether outgroup members were seen as typical (negatively associated with the criterion; $\beta$ = -.254, $F$ = 12.93, $p$ <.0001) were the only significant predictors, together accounting for 40 per cent of the variance (see Table 3.9).

Regression analyses for both groups separately yielded highly satisfactory results (see Table 3.9). For the Hindus, amount of outgroup contact ($\beta$ = .497, $F$ = 21.91, $p$ <.001) was the best predictor, accounting for 34 per cent of the variance. The addition of whether outgroup members were seen as typical ($\beta$ = -.243, $F$ = 5.22, $p$ <.026) accounted for an additional 5 per cent of the variance, albeit revealing a negative association. These two predictors together accounted for 39 per cent of the variance in perceived outgroup variability.

Table 3.9 Regression of Perceived Outgroup Variability[1]

| Step No. | Predictor variables | Multiple $R^2$ value | $R^2$ change | Beta | F |
|---|---|---|---|---|---|
| **Entire Sample:** | | | | | |
| 1. | Amount of contact with outgroup | .338 | ___ | .519 | 54.20 [c] |
| 2. | Outgroup members seen as typical | .399 | .061 | -.254 | 12.93 [c] |
| **Hindu Sample:** | | | | | |
| 1. | Amount of contact with outgroup | .342 | ___ | .497 | 21.91 [c] |
| 2. | Outgroup members seen as typical | .393 | .051 | -.243 | 5.22 [a] |
| **Muslim Sample:** | | | | | |
| 1. | Amount of contact with outgroup | .309 | ___ | .446 | 20.39 [c] |
| 2. | Outgroup members seen as typical | .387 | .078 | -.343 | 11.79 [c] |
| 3. | Awareness of intergroup similarities | .446 | .059 | .250 | 6.60 [a] |

Note. $F(2,128)$ = 42.43, $p$ <.0001 for entire sample; $F(2,62)$ = 20.08, $p$ <.0001 for Hindu sample; $F(3,62)$ = 16.61, $p$ <.0001 for Muslim sample.

[a] $p$ <.05, [b] $p$ <.01, [c] $p$ <.001.

[1] Reported beta weights and $F$ values refer to that predictor on the last step.

The results for Muslims were highly comparable. Again, amount of contact ($\beta$ = .446, $F$ = 20.39, $p$ <.001) and perceived typicality ($\beta$ = -.343, $F$ = 11.79, $p$ <.001) were entered in the first two steps, and again there was a negative association between typicality and variability. These two variables explained 31 and 8 per cent of the variance, respectively, but were supplemented by one further predictor, awareness of intergroup similarity ($\beta$ = .250, $F$ = 6.60, $p$ <.013), which together explained 45 per cent of the variance.

Intergroup anxiety. The regression of intergroup anxiety on contact for the entire sample revealed that the best predictor was whether outgroup members were seen as typical, accounting for 40 per cent of the variance. Religious group of respondents, as a dichotomous variable, accounted for an additional 12 per cent of the variance reflecting the fact that intergroup anxiety was maximized when the respondents were Hindus. In addition, amount of contact (with negative association with criterion) and awareness of intergroup differences emerged as significant predictors and accounted for an additional 11 and 2 per cent of the variance, respectively. Overall, these four significant predictors accounted for 54 per cent of the variance in intergroup anxiety.

The regression analyses again yielded superior prediction for the Hindus than for the Muslims (see Table 3.10 ). For the Hindus, the perceived typicality of outgroup members ($\beta$ = .488, $F$ = 30.92, $p$ <.001) was the best predictor, accounting for 42 per cent of the variance. Amount of outgroup contact ($\beta$ = -.437, $F$ = 24.82, $p$ <.001) also made a major contribution (17%), being negatively associated with anxiety, as one would expect. These two predictors accounted for 59 per cent of the variance in intergroup anxiety.

For the Muslims, awareness of intergroup differences ($\beta$ = .295, $F$ = 6.59, $p$ <.013) was the highest predictor, accounting for 21 per cent of the variance. Additional contributions were made by amount of outgroup contact (negatively

associated with anxiety; $\beta$ = -.257, $F$ = 5.60, $p$ <.022) and the perception of outgroup members as typical ($\beta$ = .236, $F$ = 4.25, $p$ <.045), which explained a further 8 and 5 per cent of the variance, respectively. Overall, these three predictors accounted for 34 per cent of the variance in intergroup anxiety.

Table 3.10 Regression of Intergroup Anxiety on Contact[1]

| Step No. | Predictor variables | Multiple $R^2$ value | $R^2$ change | Beta | F |
|---|---|---|---|---|---|
| **Entire Sample:** | | | | | |
| 1. | Outgroup member seen as typical | .296 | ___ | .324 | 22.36 [c] |
| 2. | Religious group of respondents | .414 | .118 | .430 | 41.81 [c] |
| 3. | Amount of contact with outgroup | .528 | .113 | -.338 | 25.57 [c] |
| 4. | Awareness of intergroup differences | .543 | .015 | .144 | 4.32 [a] |
| **Hindu Sample:** | | | | | |
| 1. | Outgroup members seen as typical | .418 | ___ | .488 | 30.92 [c] |
| 2. | Amount of contact with outgroup | .585 | .166 | -.437 | 24.82 [c] |
| **Muslim Sample:** | | | | | |
| 1. | Awareness of intergroup differences | .210 | ___ | .295 | 6.59 [a] |
| 2. | Amount of contact with outgroup | .290 | .080 | -.257 | 5.60 [a] |
| 3. | Outgroup members seen as typical | .336 | .045 | .236 | 4.25 [a] |

Note. $F(4,126)$ = 37.50, $p$ <.0001 for entire sample; $F(2,62)$ = 43.61, $p$ <.0001 for Hindu sample; $F(3,62)$ = 10.45, $p$ <.0001 for Muslim sample. Muslim and Hindu respondents were coded as 0 and 1, respectively in the dummy variable.

[a] $p$ <.05, [b] $p$ <.01, [c] $p$ <.001.

[1] Reported beta weights and $F$ values refer to that predictor on the last step.

### 3.3.4 Path analyses

Multiple regression analyses are to some extent limited to the estimation of direct effects of a set of predictor variables on the criterion variable. Use of multiple regression techniques in conjunction with a causal theory, path analysis (Kerlinger & Pedhazur, 1973), shifts the emphasis to a description of the entire structure of linkages between predictor variables and criterion variables. However, it should be noted that path analysis cannot establish causality. All it can do is to examine the pattern of relationships between theoretically relevant variables, but can neither confirm nor reject the hypothetical causal link.

In this respect the present data set permits the examination of previously discussed theoretically interesting models such as intergroup anxiety (Stephan & Stephan, 1985) and interpersonal contact (Brewer & Miller, 1984). In order to test these theoretical models, two structural equations for the intergroup anxiety model and three structural equations for the interpersonal contact model were set up (see Bryman & Cramer, 1990; see Figures 3.1 - 3.4). A series of multiple regression analyses were computed using the forced entry technique, where all relevant predictor variables were entered simultaneously into the equation. As previous regression analyses on three criterion variables (outgroup attitude, perceived variability and intergroup anxiety) suggested that Hindus and Muslims differ in terms of predictability and also selection of predictors (e.g., outgroup attitude), these models were tested separately for both groups.

Stephan and Stephan (1985) proposed that prior intergroup relations (e.g., positive nature of contact), intergroup cognitions (e.g., stereotypes) and situational factors (e.g., status difference in society) affect the behavioural, cognitive and affective consequences of intergroup contact mediated by intergroup anxiety. The path diagrams in Figure 3.1 (Hindu sample) and 3.2 (Muslim sample) depict this intergroup anxiety model on the basis of the present data set.

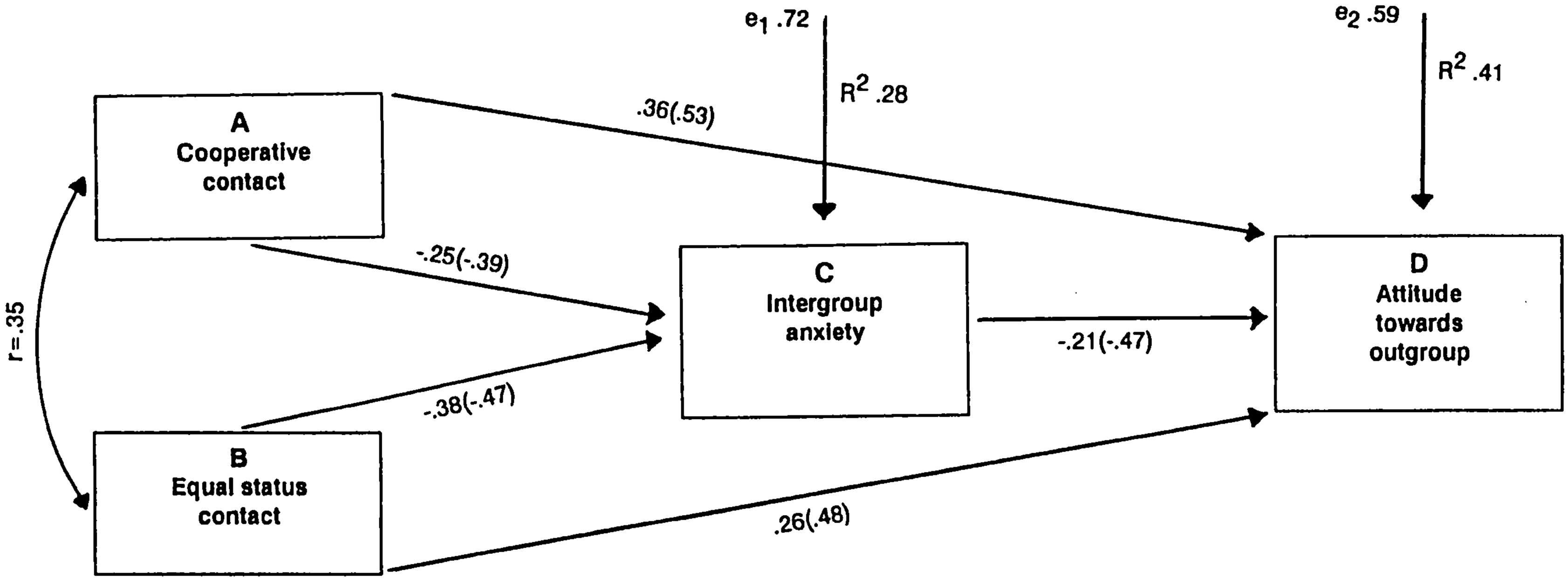


Figure 3.1. Path diagram of Stephan and Stephan's (1985) intergroup anxiety model (Hindu sample, N = 65).

Note. Significant paths only are shown. Standardized beta weights are shown outside, and zero-order correlations inside, the parentheses. Error terms are denoted by e, and explained variance by $R^2$.

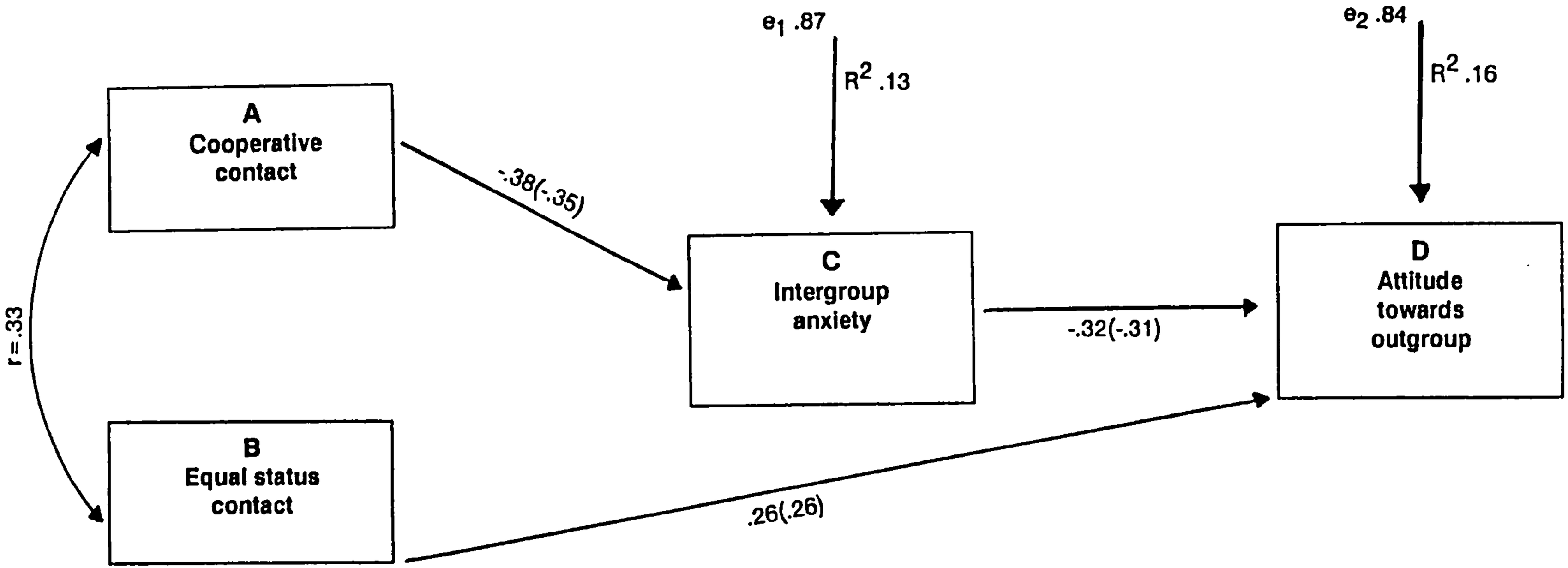


Figure 3.2. Path diagram of Stephan and Stephan's (1985) intergroup anxiety model (Muslim sample, N = 66).

Note. Significant paths only are shown. Standardized beta weights are shown outside, and zero-order correlations inside, the parentheses. Error terms are denoted by e, and explained variance by $R^2$.

As can be seen from Figure 3.1, positive nature of contact such as cooperative and equal status contact with the outgroup does mediate through intergroup anxiety to outgroup attitude, but these positive dimensions of contact also have a direct effect on outgroup attitude for Hindus. This path diagram clearly supports Stephan and Stephan's (1985) hypothesis that the positive nature of contact reduces intergroup anxiety and this in turn produces a facilitating effect on outgroup attitude. Figure 3.2 suggests that cooperative contact with the outgroup has only an indirect effect on outgroup attitude via reduced intergroup anxiety for Muslims. Equal status has only a direct effect on outgroup attitude. As a socio-numeric majority, equal status contact for Muslims does not have any facilitating effect in reducing their intergroup anxiety as reflected in Figure 3.1 for Hindu minority data.

Brewer and Miller (1984) suggested that in order to achieve a positive effect, contact should take place at the interpersonal level and awareness of category boundaries should also be subdued. The path diagrams in Figures 3.3 (Hindu sample) and 3.4 (Muslim sample) summarize Brewer and Miller's interpersonal contact model. As can be seen from Figure 3.3 (Hindu sample), intimate and equal status contact do not mediate via individual basis of contact to the outgroup attitude. However, intimate contact has an indirect effect on outgroup attitude. This suggests that intimate contact may reduce awareness of intergroup differences and in turn produce a facilitating effect on outgroup attitude. Both intimate and equal status contact exert significant direct effects on outgroup attitude. Figure 3.4 (Muslim sample) suggests that for the socio-numeric majority group, intimate contact has a direct positive effect on outgroup attitude. In addition, intimate contact may reduce awareness of intergroup differences, but there is no significant link between awareness of differences

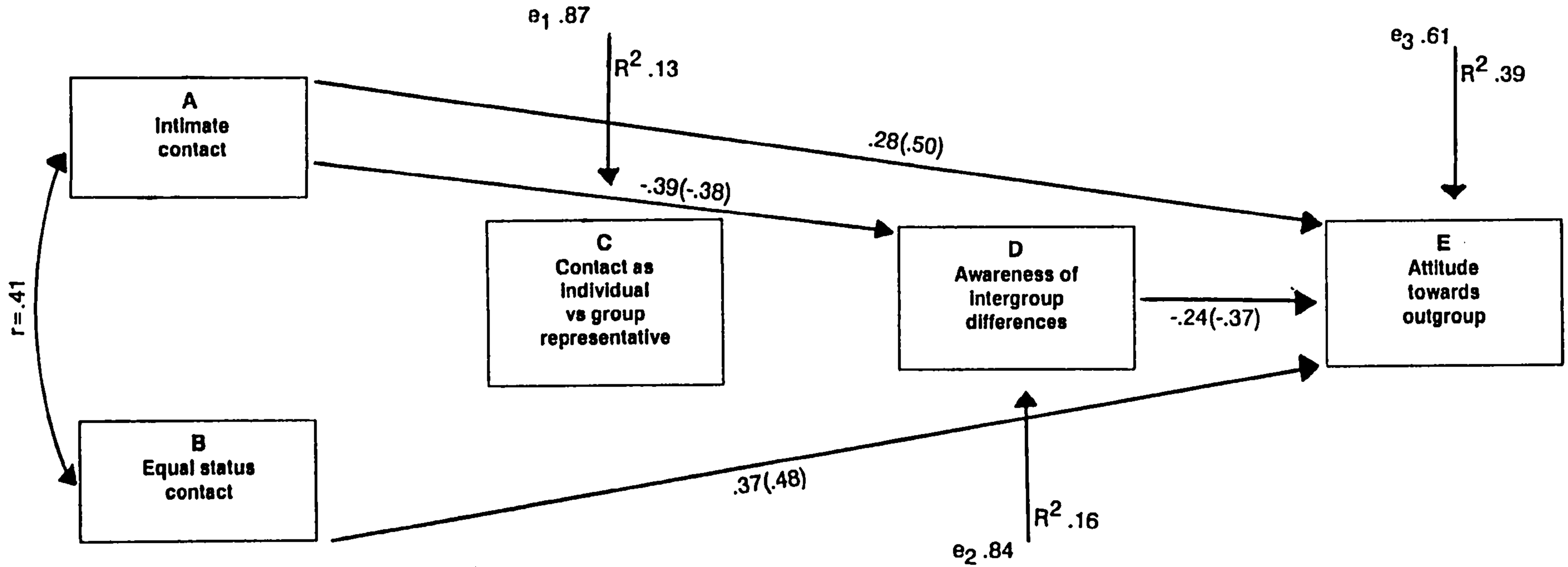


Figure 3.3. Path diagram of Brewer and Miller's (1984) interpersonal contact model (Hindu sample, N = 65).

Note. Significant paths only are shown. Standardized beta weights are shown outside, and zero-order correlations inside, the parentheses. Error terms are denoted by e, and explained variance by $R^2$.

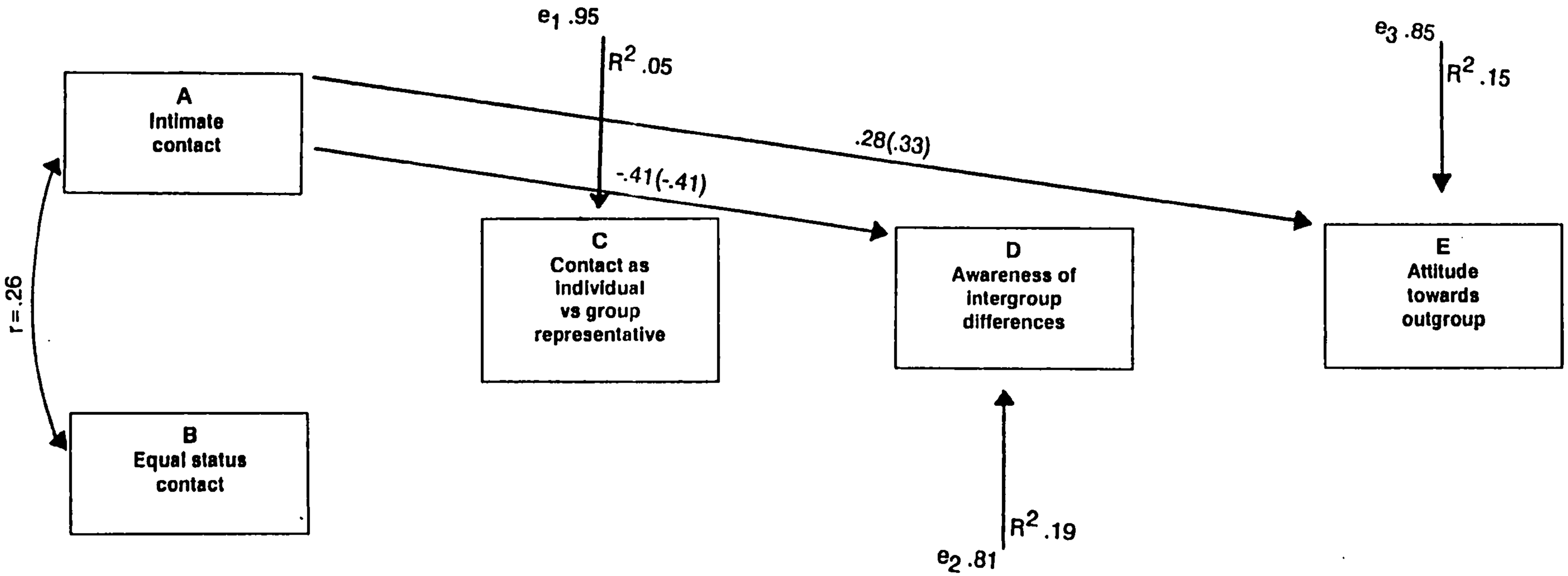


Figure 3.4. Path diagram of Brewer and Miller's (1984) interpersonal contact model (Muslim sample, N = 66).

Note. Significant paths only are shown. Standardized beta weights are shown outside, and zero-order correlations inside, the parentheses. Error terms are denoted by e, and explained variance by $R^2$.

and outgroup attitude. These path diagrams clearly show that positive dimensions of contact do not mediate via the individual basis of contact to the outgroup attitude.

It is possible to check how well the path model fits the data by examining how well the original correlations can be reproduced by the path analytic model. Table 3.11 (for Figures 3.1 and 3.2) and Tables 3.12 and 3.13 (for Figures 3.3 and 3.4, respectively) present the decomposition of the total covariance (correlation) between each pair of variables in the model, into causal effects (direct-path coefficients, and indirect - through the effects of other variables) and non-causal or spurious effects. The size of these spurious effects may be taken as a measure of the 'goodness of fit' of the model (large spurious effects indicate that the original correlation was not perfectly reproduced by the model). As can be seen from the three correlation decomposition tables (see Tables 3.11 - 3.13) the spurious effects are very small, particularly for the Muslim sample, indicating that the model exhibits a good degree of fit with the data. However, with the Hindu sample the spurious effects are somewhat higher. As has already been mentioned, intercorrelation among predictor variables and also among criterion variables was higher in the case of the Hindu sample.

Table 3.11 Correlation Decomposition for Figure 3.1 (above) and Figure 3.2 (below)

| Bivariate Relationship | Total Covariance | Causal Effects: Direct | Causal Effects: Indirect | Causal Effects: Total | Noncausal (spurious) |
|---|---|---|---|---|---|
| (A) - (B) | .347 | -- | -- | -- | .347 |
| (A) - (C) | -.385 | -.253 | -- | -.253 | -.132 |
| (A) - (D) | .528 | .357 | (-.253)x(-.214)=.054 | .411 | .117 |
| (B) - (C) | -.467 | -.381 | -- | -.381 | -.086 |
| (B) - (D) | .479 | .255 | (-.381)x(-.214)=.082 | .337 | .142 |
| (C) - (D) | -.471 | -.214 | -- | -.214 | -.257 |
| (A) - (B) | .334 | -- | -- | -- | .334 |
| (A) - (C) | -.353 | -.380 | -- | -.380 | .027 |
| (A) - (D) | .138 | -.063 | (-.380)x(-.320)=.122 | .059 | .079 |
| (B) - (C) | -.046 | .081 | -- | .081 | -.127 |
| (B) - (D) | .256 | .262 | (.081)x(-.320)=-.026 | .236 | .020 |
| (C) - (D) | -.310 | -.320 | -- | -.320 | .010 |

Total Covariance = Zero order correlation coefficient;
Direct effect = Standardized regression coefficient (Path coef. or $\beta$);
Indirect effect = Sum of all possible products of Betas of indirect paths joining the two variables in the bivariate relationship;
Total effect = Sum of Direct + Indirect effects;
Non-causal effect = Total covariance - Total causal effects.

Table 3.12 Correlation Decomposition for Figure 3.3

| Bivariate Relationship | Total Covariance | Causal Effects: Direct | Causal Effects: Indirect | Causal Effects: Total | Noncausal (spurious) |
|---|---|---|---|---|---|
| (A) - (B) | .406 | -- | -- | -- | .406 |
| (A) - (C) | -.306 | -.222 | -- | -.222 | -.084 |
| (A) - (D) | -.383 | -.394 | (-.222)x(.109)=-.024 | -.418 | .035 |
| (A) - (E) | .500 | .278 | (-.222)x(.109)x(-.244)+ (-.394)x(-.244)+ (-.222)x(.071)=.086 | .364 | .146 |
| (B) - (C) | -.295 | -.205 | -- | -.205 | -.090 |
| (B) - (D) | -.084 | .109 | (-.205)x(.109)=-.022 | .089 | -.173 |
| (B) - (E) | .479 | .366 | (-.205)x(.110)x(-.244)+ (.108)x(-.244)+ (-.205)x(.071)=-.035 | .331 | .148 |
| (C) - (D) | .198 | .110 | -- | .110 | .088 |
| (C) - (E) | -.171 | .071 | (.110)x(-.244)=-.027 | .044 | -.215 |
| (D) - (E) | -.368 | -.244 | -- | -.244 | .124 |

Total Covariance = Zero order correlation coefficient;
Direct effect = Standardized regression coefficient (Path coef. $\beta$);
Indirect effect = Sum of all possible products of Betas of indirect paths joining the two variables in the bivariate relationship;
Total effect = Sum of Direct + Indirect effects;
Non-causal effect = Total covariance - Total causal effects.

Table 3.13 Correlation Decomposition for Figure 3.4

| Bivariate Relationship | Total Covariance | Causal Effects: Direct | Causal Effects: Indirect | Causal Effects: Total | Noncausal (spurious) |
|---|---|---|---|---|---|
| (A) - (B) | .260 | -- | -- | --- | .260 |
| (A) - (C) | -.168 | -.131 | -- | -.131 | -.037 |
| (A) - (D) | -.409 | -.408 | (-.131)x(.136)=-.018 | -.426 | .017 |
| (A) - (E) | .327 | .275 | (-.131)x(.136)x(-.048)+ (-.408)x(-.048)+ (-.131)x(.129)=.004 | .279 | .048 |
| (B) - (C) | -.177 | -.143 | -- | -.143 | -.034 |
| (B) - (D) | -.046 | .084 | (-.143)x(.136)=-.019 | .065 | -.111 |
| (B) - (E) | .256 | .205 | (-.143)x(.136)x(-.048)+ (.084)x(-.048)+ (-.143)x(.129)=-.022 | .183 | .073 |
| (C) - (D) | .190 | .136 | -- | .136 | .054 |
| (C) - (E) | .038 | .129 | (.136)x(-.048)=-.007 | .122 | -.084 |
| (D) - (E) | -.146 | -.048 | -- | -.048 | -.098 |

Total Covariance = Zero order correlation coefficient;
Direct effect = Standardized regression coefficient (Path coef. $\beta$);
Indirect effect = Sum of all possible products of Betas of indirect paths joining the two variables in the bivariate relationship;
Total effect = Sum of Direct + Indirect effects;
Non-causal effect = Total covariance - Total causal effects.

## 3.4 DISCUSSION

This research provided quite a detailed picture of intergroup contact between Hindus and Muslims in Bangladesh, which forms the background to any attempt to relate contact predictors to criterion variables. In this section, the context of Hindu-Muslim intergroup contact and then the evidence for contact as a predictor of outgroup attitude, perceived outgroup variability, and intergroup anxiety is discussed.

Contact between ethnic groups is clearly part of everyday life in this multicultural society. The amount and nature of contact are, however, determined by religious group membership. The Hindu minority respondents experienced contact as less pleasant and less equal, were more aware of intergroup differences, and reported higher levels of intergroup anxiety than did Muslims. A dominant response to negatively experienced contact is avoidance, because it may reduce anxiety (Stephan & Stephan, 1985; 1989). Yet in the context of Bangladesh, a minority of Hindus (12% of the population) must inevitably come into contact with the majority of Muslims (86%). They did, indeed, report higher levels of contact, but it tended to be contact involving several Muslims and a sole Hindu.

Hindus expressed slightly more negative attitudes to their outgroup than did Muslims. This reaction stems no doubt from their feelings of deprivation and hatred as a socio-numeric minority and is consistent with their contact experiences being perceived as less pleasant and less equal encounters. The results of this comparison emphasize the importance of negative intergroup attitudes as a factor associated with intergroup anxiety. This pattern of negative attitudes towards the social majority is to some extent comparable with the findings of Ghosh and Huq (1985), where Hindu university students in the same culture showed higher positive owngroup evaluation than Muslims. Contrary to

many studies (e.g., Sachdev & Bourhis, 1985), as a secure high status group Muslims had shown more positive attitudes towards a dominated social minority (see Vleeming, 1983). This finding supports Brewer and Kramer's (1985) conclusion that, in general, high status groups exhibit less ingroup favoritism than the groups of lower status or high status group members whose status differences are threatened.

Although it is not, of course, possible to determine the direction of causality in this correlational study, there is strong evidence that differences in self-reported contact (notably amount of contact, perceived typicality of outgroup contact partners and, to a lesser extent, pleasantness and intimacy of contact) were associated with each of the three criterion variables. There were also marked differences in predictions, and the selection of predictors, between the two groups in the case of outgroup attitudes, but results were comparable for the other two criterion variables, indicating that some general relationships have been uncovered.

Outgroup attitude is the standard criterion variable in contact research and serves as a measure of generalization from outgroup contact partners to evaluation of the outgroup as a whole. For the Hindus, contact dimensions proved good predictors of outgroup attitude (explaining 56% of the variance), especially whether contact was perceived as pleasant and, to a lesser extent, the simple amount of contact and whether it was perceived as cooperative. These findings parallel those of many other studies on intergroup contact (see Amir, 1969, for a review). In terms of regression analysis the results for the Muslims were distinctly worse. There was only one significant predictor, intimate contact, which accounted for 11 per cent of the variance. Open-ended responses to the pilot study had shown that Muslims had expressed the view that, not only did they have less contact with Hindus but the nature of contact on their part was highly

selective. Presumably, many of the Muslims can, and do, avoid contact with Hindus, and it is not necessary for them in the same way as it is for a small minority (thus the impact of only intimate contact for the Muslims).

Contrary to the predictions, there was no evidence that perceptions of the contact situation in intergroup rather than interpersonal terms, or of outgroup members encountered as typical, affected outgroup attitudes (cf. Hewstone & Brown, 1986). However, there was a significant negative correlation between typicality and outgroup attitudes for Hindus ($r(65) = -.475, p < .001$), but not for Muslims ($r(66) = -.024$, *n.s.*). Hindus, as the minority, reported some outgroup contact, whereas majority Muslims could quite easily avoid it. One explanation for this finding is that the typical outgroup member was perceived in such negative terms. As Wilder (1986b) pointed out, where the group as a whole is perceived in terms of negative stereotypes, then "typical" members of that group must be perceived to possess these negative characteristics. It is clear that Hindus hold negative stereotypes of the group as a whole, and they have shown a negative overall attitude towards the Muslims. In laboratory studies we can manipulate both typicality of a contact partner and positivity of outcomes (e.g., Wilder, 1984), and decide when to emphasize typicality; but field studies of intergroup relations do not permit such control. This suggested negative impact of typicality is supported by its relationship to both of the other criterion measures.

This study provides clear evidence of a relationship between individual-level measures of contact (or familiarity) and perceived outgroup variability. The level of prediction was quite high for both Hindu and Muslim groups (39% and 45% explained variance, respectively), and in each case amount of contact was the most important predictor, followed by perception of outgroup members as typical (awareness of intergroup similarities was also a significant predictor for

Muslims). It makes intuitive sense that the more outgroup members one meets, the more variable one perceives the outgroup to be; this finding also supports the suggestion that perceived outgroup variability be incorporated as an outcome measure in contact research (Linville et al., 1986; Park & Judd, 1990). The perceived typicality of outgroup members encountered was, however, negatively related to perceived variability, presumably because of the prevalent negative outgroup stereotypes held by both groups. Again, the difficulties associated with Rothbart and John's (1985) cognitive analysis of intergroup contact are emphasized. There is no doubt that disconfirming attributes will become associated with a group stereotype only if they belong to an individual who is perceived as "typical" and therefore has high goodness-of-fit to the prototype (for evidence of the mediating role of typicality, see Johnston & Hewstone, in press). However, in cases of real intergroup conflict, and in the absence of experimental manipulations, it may well be that typical outgroup members are primarily associated with negative attributes.

The relationship between amount of contact and perceived variability supports Linville et al.'s (1986, 1989) findings relating differential familiarity with in- and outgroups to differences in their perceived variability. It does not, however, imply that familiarity is a necessary, or even a sufficient, condition for increased perceived outgroup variability. Particularly in cases of contact between real-life groups, there may be strong situational sample bias, such that contact occurs within a restricted range of situations (Quattrone, 1986; Wilder, 1986b). Where this is the case, contact may be unrelated to perceived variability. However, another study with American students studying in England recently provided evidence that greater contact with the host nation led them to perceive greater variability in response to range measures focusing on dimensional variability (Stangor, Jonas, Hewstone, & Stroebe, 1991). These reported

significant findings were obtained using one type of measure of variability (the perceived dispersion of group members about their central tendency). Future research might try to replicate this finding using other types of measure, for example the extent to which dimensional attributes are perceived to covary (taxonomic variability; Quattrone, 1986) and perceptions of the extent to which members of the group fit or confirm the group stereotype (Park & Judd, 1990). Nonetheless these results do provide compelling evidence that contact can be associated with changes in the constraint values of outgroup schemata (see Crocker, Fiske & Taylor, 1984).

As can be seen from the correlation matrix, perceived variability and attitude towards the outgroup was only significantly correlated for Hindus ($r(65) = .270\ p < .03$) but not for Muslims ($r(66) = .131$, *n.s*). It is interesting to note that contact had a greater impact on perceived variability than on outgroup attitudes. One possibility is that changes in perceived variability open up the way to changes in attitudes and stereotypes (central tendencies). However, increases in perceived variability may also be used as a buffer against central-tendency change, if perceivers simply accept a wider range of outgroup members, or organize them into 'subtypes', thus maintaining their stereotypes (Weber & Crocker, 1983). The processes by which stereotype change and perceived variability are related therefore require further investigation.

The regression results for intergroup anxiety revealed quite strong relationships between contact predictors and the criterion for Hindus and Muslims (59% and 34% explained variance, respectively). For the Hindus, the major predictor of anxiety was whether outgroup members were perceived as typical, which is consistent with the earlier discussion of typicality. An additional predictor was amount of contact, which was negatively associated with anxiety. For the Muslims, awareness of intergroup differences was the most significant

predictor, followed by amount of contact with the outgroup (negative association) and, again, perception of outgroup members as typical.

The path analyses for intergroup anxiety largely validated Stephan and Stephan's (1985) model. In addition, these regression results are broadly comparable with Stephan and Stephan's (1985) study, which used a different set of predictors. Reported positive associations for both typicality and awareness of differences in this study mirror their reported effects of stereotyping and believed dissimilarity, respectively. In this study negative associations for amount of contact parallel their reported effect for voluntary contact (correlations between amount of contact and voluntary contact are: $r(65) = .619, p < .001$ for Hindus and $r(66) = .609, p < .001$ for Muslims).

The path analyses for testing Brewer and Miller's (1984) model failed to support the idea that contact experienced on an inter-individual basis has any direct influence on outgroup attitude. Having just argued for the importance of typicality, the findings clearly support Stephan and Stephan's (1984) view that knowledge and understanding of differences as well as similarities between groups are important in intergroup contact (Hewstone & Brown, 1986). It should be acknowledged, however, that there may be difficulties and dangers in addressing potentially conflictual intergroup differences. As in the case of typicality, field studies are hampered by a lack of control over what differences are highlighted, when in the course of contact this happens, and under what circumstances.

Data from this study also permitted tests of the association between intergroup anxiety and information-processing biases. As predicted, a negative association between intergroup anxiety and outgroup attitudes was found. This is also confirmed by the negative association between intergroup anxiety and perceived outgroup variability. These findings are consistent with suggestions

that anxiety narrows the focus of attention, leading to a reliance on simplified, schematic, expectancy-confirming processing (Stephan & Stephan, 1985; Wilder & Shapiro, 1989).

To conclude, this first study revealed that dimensions of intergroup contact were significant predictors of all three criterion variables, although different dimensions emerged as the best predictors in each case, and predictions were generally better for the minority group. Of course, the minority (Hindus) differ in terms of power, numerosity and other characteristics from the majority (Muslims) and in a field study it is not possible to isolate the precise determinants of observed relationships. However, it is evident that minority-group members had more experience of contact and reported higher anxiety, both of which appear to have a major impact on intergroup perceptions. It is noteworthy that ratings of the quality of contact tended to be the best predictors of outgroup contact, amount of contact was the best predictor of perceived outgroup variability, and perceptions of typicality and awareness of intergroup differences were the best (negative) predictors of intergroup anxiety. These findings also indicated that variables such as perceived typicality may have different effects in field studies and laboratory experiments. A full understanding of the contact hypothesis will only be achieved by research using a variety of methods and theoretically grounded variables in diverse research and cultural settings (see Pettigrew, 1986; Stephan, 1987).

Note.

[1] Pettigrew (1981) suggested that increasing the number of positive subtypes of a group will gradually break up a negative stereotype of a group.

# CHAPTER 4

## CROSSED CATEGORIZATION AND INTERGROUP RELATIONS: THE IMPACT OF INTERGROUP EVALUATIONS, PERCEIVED VARIABILITY AND SELF-ESTEEM

Two studies explored the impact of crossed categorization on intergroup evaluations and perceived group variability. In Study 4.1, Muslim (majority) and Hindu (minority) group members evaluated one of four target groups created by crossing religious (Hindu/Muslim) and national (Bangladesh/India) categorization dimensions, and then rated the target group's perceived variability. Crossed categorization reduced discrimination (compared with the double ingroup), but only when religious, not national, categorization was shared. Crossed categorization had little impact on perceived outgroup homogeneity, but there was an ingroup homogeneity effect for members of the Hindu minority. Study 4.2 extended the paradigm by including a linguistic categorization dimension, a different measure of variability, and assessing self-esteem. Crossed categorization again reduced discrimination, especially when the religious categorization or more than one categorization dimension was shared, but did not impact on perceived homogeneity. The Hindus again revealed an ingroup homogeneity effect. Personal and collective self-esteem were lower in the minority group. For both groups personal and collective self-esteem did not vary across conditions but intergroup evaluations varied considerably. The results of both studies tend to support an integration of social identity and category dominance models, with

crossed categorization having its impact via the reduced utility of social categorization, rather than decreased outgroup homogeneity.

## 4.1 GENERAL INTRODUCTION.

It is now well established that intergroup discriminatory behaviour can develop as a result of social categorization (for reviews, see Messick & Mackie, 1989; Tajfel, 1984; Turner et al., 1987). Tajfel (1978) suggested that as category membership become salient, there will be a tendency to exaggerate differences on critical dimensions between individuals falling into distinct categories (an 'interclass' effect) and to minimize differences within categories (an 'intraclass' effect). Doise and other researchers have shown that anything which increases the salience of social categorization leads to greater intergroup differentiation (e.g., Doise & Sinclair, 1973).

However, in real life situations people do not always belong to a single category. For example, at the same time someone living in Britain may be an Asian and also an active member of the labour party. Each of these secondary classifications is independent of original category division and when both these original (more salient) and secondary (less salient) categorizations become involved in any social situation, they are referred to as cross-cutting dimensions of categorization in the intergroup literature. However, which category will be regarded as primary and which one secondary is entirely dependent on the person and the specific situation involved.

Social theorists have long suspected that criss-crossing of group memberships reduces intergroup conflict (e.g., Coser, 1956; Deutsch, 1973). There is some anthropological evidence supporting this idea. For example, LeVine and Campbell (1972) have discussed, from an anthropological point of view, the idea that societies are seldom clearly defined entities, so overlapping

and similarities with neighbouring groups are common features in any society. They also discussed evidence (e.g., Evans-Pritchard, 1940) which suggested a distinction of membership in ethnic communities between 'pyramidal segmentary' and 'cross-cutting' structures. In 'pyramidal segmentary' structures, individuals were members of different sub-groups which are in turn segments of large collectivities, and they define themselves as group members by oppositions or contrasts to other groups. In 'cross-cutting' structures, individuals are members of one group on the basis of one set of criteria and of another group in terms of other criteria. Ethnological observations show that multiple memberships, which allow people to cross each other's group boundaries, reduce confrontation between the segments of society. Jaulin (1973, cited in Deschamps & Doise, 1978) pointed out the results of various types of exogomous marriages where individuals who belong to two definite categories are further subdivided into other categories and thus 'other' can no longer be thought of as 'not I' and is therefore not negatively defined. Similarly Lorwine (1972) proposed the survival of nations marked by linguistic and ideological conflict can only be achieved by crossing group memberships in this way.

Compared with the mutually exclusive ad hoc group memberships it is common to create in laboratories, dichotomizing ingroup and outgroup (simple categorization), most realistic contexts involve the simultaneous operation of several categorizations, some of which coincide and some of which tend to cut across each other (crossed categorization). Thus, crossed categorization refers to the crossing of one dichotomous categorization, A/B, by a second one, X/Y. This means that some people who belong to an individual's membership group according to one categorization simultaneously belong to a different group according to a second categorization. Crossing one categorization with another orthogonal dimension results in four groups: the membership group, which is

ingroup on both dimensions; a double outgroup; and two crossed conditions (ingroup-outgroup, and outgroup-ingroup).

The effects of cross-cutting categories was first experimentally demonstrated by Deschamps and Doise (1978) in their study of categorical differentiation. Previously Deschamps (1977) studied the effects of crossed membership in judgements of physical stimuli and found disappearance of the effect of category when crossed membership was introduced. On the basis of this earlier finding, Doise (1978) proposed his "category differentiation model" which suggests that while single categorization leads to an accentuation of the differences between and similarities within categories (see Tajfel, 1959), the crossing of two categorizations leads to "convergence" between the categories (weakening the interclass effect) and "divergence" within each category (weakening the intraclass effect). This should lead to a neutralization of interclass and intraclass effects.

Deschamps and Doise (1978) found evidence of reduced evaluative differentiation when real life categories were crossed with a trivial experimental one. In the simple condition of this experiment, six boys and six girls were seated separately at two sides of a rectangular table. In the crossed condition, the seating arrangement was the same as the simple condition, but an additional categorization was introduced. Three boys along one side of the table and three girls along the adjacent side were labelled red and the three other boys and three other girls blue. Thus, crossed-categorization was created by crossing gender (boy/girl) with colour-label identity (red/blue). In the both conditions, subjects had to solve a number of puzzles and it was found that the performance of same-sex persons was rated as significantly better than that of opposite-sex persons in the simple condition but not in the crossed condition. Similarly Commins and Lockwood (1978) reported a study in which they crossed an experimentally

induced transient categorization with a distinct real life categorization, i.e., the Catholic/Protestant division in Northern Ireland. They found some decrease in intergroup discrimination in the crossed condition, but this did not reach statistical significance.[1]

Two distinct problems were identified by Brown and Turner (1979) with Deschamps and Doise's (1978) study. First, if the processes of convergence and divergence cancel each other out, then in order to get complete disappearance of discrimination both categorizations should have been presented with equal salience. But Deschamps and Doise did not employ crossed-categorizations with equivalent psychological significance. Second, the interpretation of their results is also questionable on the grounds that the reduction in discrimination may have been due to the fact that the different conditions varied in cognitive complexity (i.e., in a repeated measures design, primary-school subjects simultaneously had to think in terms of two categorization dimensions). Therefore, the complexity of these tasks may have been experienced as cognitive overload and led subjects to ignore categorization altogether.

Brown and Turner (1979) carried out a conceptual replication of Deschamps and Doise's (1978) study. They used two artificially created simple categorizations so that both could be regarded as of equal psychological significance. Crossed-categorization situations were presented in two forms: (a) with a simplified rating task where subjects had to rate only the members of two clearly distinct categories and (b) with a complex rating task where subjects had to rate every member of all crossed groups. They obtained very clear intergroup discrimination in the crossed conditions with simplified ratings. But in the crossed conditions with a complex rating task, intergroup discrimination was not statistically significant. On the basis of this finding they concluded that the

absence of intergroup discrimination in the crossed condition of Deschamps and Doise's study was due to the complexity of the rating task.

Despite Brown and Turner's criticism, the main finding of Deschamps and Doise was replicated by Vanbeselaere (1987). Using two artificial categories and improved methodology, he found bias was reduced, not eliminated, in the crossed-categorization conditions, on both dependent measures (i.e., specific and general evaluations). Similarly Rehm, Lilli, and Van Eimeren (1988) reported a study where generally negatively evaluated female senior citizens were crossed with a positively evaluated female who regularly practised gymnastics. On all five dependent variables, the differentiation effects were found to be smaller in the crossed condition.

The crossed-categorization literature offers two different theoretical frameworks to explain this phenomenon. According to the "category differentiation model" (Doise, 1978), an accentuation of the differences between and similarities within categories at the cognitive and perceptual level is expected. This differentiation between in- and outgroup on the cognitive-perceptual level will lead to equivalent differentiation at the evaluative level. Thus, categorizing people into overlapping categories leads to convergence between the categories and divergence within each category, which in turn cancels each other out and intergroup discrimination should disappear. Many studies support this assumption (e.g., Deschamps, 1977; Deschamps & Doise, 1989; Vanbeselaere, 1987, 1991). Deschamps and Doise (1978) however reported a complete disappearance of discrimination between all groups for performance evaluation but not on trait ratings. They concluded that reduced intergroup discrimination does not generalize beyond the experimental situation (e.g., trait ratings). However, later studies rule out this account. As Deschamps (1977) suggested, criss-cross arrangements eliminate bias due to conflicting cognitive

tendencies; accordingly Deschamps and Doise (1978) showed an absence of discrimination even in double-outgroup condition. Vanbeselare (1987), despite showing a similar tendency in his study, pointed out that this cognitive explanation should predict reduced discrimination in some crossed conditions, but increased discrimination in others, particularly in the double-outgroup condition, where only processes of divergence are activated.[2] This is rather consistent with Brewer and Campbell's (1976) discussion of increased discrimination in situations of "converging boundaries", where multiple intergroup differences coincide. Diehl (1989 (cited in Vanbeselaere, 1991); 1990), using two artificially created categorizations of equal psychological significance, also reported that subjects in a crossed categorization situation discriminate against the totally different group, but not against a partly overlapping group.

In contrast to Doise's purely cognitive model, an account of crossed-categorization phenomena based on social identity theory (e.g., Tajfel & Turner, 1979) argues that social categorization arouses self-evaluative social comparison process whereby individuals strive to obtain a positive self-esteem. Thus, people are often motivated to establish positively valued differences between their own and other groups to gain a positive social identity. Brown and Turner (1979) contended that minimal intergroup discrimination was primarily a motivational and not a purely cognitive bias. Accordingly they suggested that:

> "Crossing one categorization with another may complicate a person's definition of himself, but there is no reason to suppose it will weaken his desire for positive self-esteem" (p. 373).

Therefore, they hypothesized an additive combination of tendencies to discriminate in such situations. All outgroups (including half-outgroups) will be discriminated against, provided that both categories are of equal relevance to

social identity, but discrimination will be strongest towards an outgroup differing on two, rather than on only one, dimensions. However, Brown and Turner mentioned one crucial point, that in many real life contexts all crossed dimensions may not be equally salient to an individual. They therefore used two artificially created categorizations of equal significance and did not find discrimination against "half-outgroups" (e.g., AX vs BX), although they did report stronger discrimination against double- than half-outgroups (parallel results were reported by Vanbeselaere, 1987).

It can be seen from the comparison of category differentiation and social identity explanations that the former predicts no discrimination against groups which are outgroup on only one dimension, whereas the latter predicts significant discrimination. The available research tends to support the category differentiation model (Deschamps & Doise, 1978; Diehl, 1989; Vanbeselaere, 1987, 1991), albeit using weak, artificial categorizations. Both accounts agree, however, in predicting additive discrimination against double-outgroups (as reported by Brown & Turner, 1979; Diehl, 1989; Hagendoorn & Henke, 1991 and Vanbeselaere, 1991). Yet both accounts are still inadequate when real categorizations of unequal psychological significance, connoting differences in status, are used.

In this respect Brewer, Ho, Lee and Miller (1987) suggested four alternative models for explaining how different salience/identity operates in overlapping categories:

(1) Category dominance: This model assumes that due to situational or individual influences categories may not be activated with equal weight. In these cases a single category can dominate whereas categorization based on the subordinate category distinction may be totally ignored. Crossing gender and academic status of target group, Arcuri (1982) found only a main effect of status

in category-based memory errors, with the gender effect completely ignored. Similarly, Commins and Lockwood (1978) found only the effect of religious categorization, with the effects of the experimentally induced categorization ignored.

(2) Additive model: This suggests both category distinctions are attended to, and are combined additively to form a categorization judgement. For example, Vanman (1989; cited in Miller & Harrington, 1990) tested the effect of cross-cutting category memberships employing both facial EMG and self-report liking measures. Results from both measures provided support for the additive model, where positive affect and favouritism on the self-reported measure were greatest towards double ingroup, lowest for the double outgroup and intermediate for half-outgroups. Studies supporting category differentiation (e.g., Vanbeselaere, 1991) and social identity (e.g., Brown & Turner, 1979) are both consistent with the additive model.

(3) Category conjunction model: This model suggests that a target individual is only classified as an "ingroup" member when s/he shares category membership with the subject on all available category distinctions, and all other combinations are classified as "outgroup". Thus, with the exception of the "double ingroup" all overlapping categories will receive a strong evaluative bias as "outgroups". For example, Schofield and Sagar (1977) reported that schoolgirls in desegregated elementary schools displayed positive social interactions particularly with those classmates who were from the same sex and racial category.

(4) Hierarchical ordering model: This model proposes that the effects of one category distinction are dependent on prior categorization on the other dimension. Thus ingroup-outgroup differentiation on a second category distinction would be greater for a target person classified as an ingroup member

on the first dimension, than for a target classified as an outgroup member on the first dimension (e.g., Park & Rothbart, 1982).

Although the category differentiation and social identity accounts correspond most closely to the additive model, Brewer et al.'s (1987) results supported the hierarchical model when categorizations of ethnicity and gender were crossed in a field study to measure school children's desirability of social interaction. They found, with different ethnic groups in Hong Kong, that sex was dominant over ethnicity (but ethnicity was not totally ignored) in determining the desired level of intimacy of interaction, while ethnicity was dominant and sex subordinate when judging perceived similarity to self. One problem is that experimental manipulations of crossed categorization may be too weak to trigger intergroup discrimination against half outgroups as predicted by the social identity, but not the category differentiation, account.

Hagendoorn and Henke (1991) found some support for the social identity explanation in their research in India. Where Hindu (majority) and Muslim (minority) subjects' religious, social class and caste (only Hindu target group) identity were crossed, both upper class and low-caste Hindus did show the "double outgroup response" with a clear additive pattern. But while upper class Muslims rated the double outgroup in the same way as the crossed groups (out-ingroup), lower class Muslims' evaluations did not differ across groups. These inconsistent results clearly highlight the effects of intergroup status differences in real life crossed-categorization situations.

With respect to Brewer et al.'s (1989) proposed models, it is more likely that in real-life contexts primary dimensions like religion and nationality should dominate other subordinate dimensions, such as political party membership. As it is evident from the discussion in Chapter 1 that culture and life in Bangladesh is

very much oriented around religion, it was predicted that religious identity would be the most dominant dimension in this society for both Hindus and Muslims.

Social identity theory suggests that people discriminate ingroup from outgroup to enhance their social identity, and hence self-esteem. however, the relationship between self-esteem and intergroup discrimination has not yet been convincingly demonstrated (support: Hogg, Turner, Nascimento-Schulze & Spriggs, 1986; Lemyre & Smith, 1985; Oakes & Turner, 1980; failure to support: Crocker, Thompson, McGraw, Ingerman, 1987; Wagner, Lampen & Syllwasschy, 1986; see Chapter 2 for details). Research to date has mainly highlighted the relation between self-esteem and intergroup discrimination in dichotomous intergroup situations.

Brown and Turner (1979) argued that when categories overlap people may find it difficult to define themselves, but their motivation for achieving positive social identity and hence self-esteem should not be jeopardised by the complexity of categorization structure. However, Brown and Turner could not provide any empirical evidence to support this proposition. Their argument was entirely based on the original version of social identity theory (i.e., Tajfel & Turner, 1979) or Turner's (1981) version of social identity theory, where category differentiation and self-evaluative social comparison process were both regarded as important. Turner et al.'s (1987) proposed self-categorization theory mainly reflects an earlier concern with the effect of perceptual accentuation (e.g., Doise, 1978; Eiser & Stroebe, 1972; Tajfel & Wilkes, 1963). This places greater emphasis on the nature of the categorization process *per se* and virtually ignores the motivational part of traditional social identity theory (see Chapter 2).

In a recent study by Vanbeselaere (1991) subjects were divided into two groups and their self-esteem was measured either before or after the performance evaluation. Significantly higher self-esteem was reported when it

was measured after than before the evaluations, only in the simple-categorization condition. Further, no differences were found between the simple, crossed and no categorization conditions when self-esteem was measured after the evaluation. However, it is hard to say whether intergroup discrimination resulted in enhanced self-esteem in the simple condition because subjects, who did not exhibit any discrimination between self and other person in the no-catergorization condition, also expressed the same level of self-esteem. In the crossed condition, where each respondent had to evaluate four crossed groups, despite discriminating against the 'double outgroup', self-esteem did not differ when it was measured after and before the evaluation. These results do not offer any clear evidence of how self-esteem is related to simple and crossed intergroup situations.

One of the major shortcomings of Vanbeselaere's study was that a repeated measures design ruled out the possibility of providing evidence of whether self-esteem was comparable among different crossed conditions. However, this study emphasizes that realistic social categorizations, where dichotomous categories are naturally overlapped, may be required to demonstrate a link between intergroup discrimination and self-esteem. In this respect a new approach also has to be considered. It has been suggested that while social identity theory is primarily concerned with the motivation to maintain a positive social identity (i.e., collective self-esteem) research on this issue has been mainly interested in personal identity (i.e., personal self-esteem). Crocker and Luhtanen (1990) recently demonstrated that personal and collective self-esteem are significantly correlated and can also be used as an individual difference variable. Although collective self-esteem may be closer to one's social identity, studies suggest that self-esteem measures of a persistent global nature

(e.g., collective self-esteem) may not be suitable for research relating to the effects of intergroup discrimination (see Hogg & Abrams, 1990).

It has been empirically demonstrated that increased group salience leads to increased intergroup differentiation (e.g., Doise & Sinclair, 1973; van Knippenberg, Pruyn & Wilke, 1982). Several authors interpreted the reduction in bias in crossed categorization situations in terms of reduced category salience (e.g., Hogg & Abrams, 1988; Miller & Harrington, 1990; Stephan, 1985; Turner et al., 1987). Presumably, in crossed categorization conditions, salience of group membership becomes divided between both in- and outgroup, and thus this reduced or contradictory group salience leads to less negative evaluation of overlapping "half-outgroups". However, no empirical work has been done to support this speculation. Messick and Mackie (1989) suggested that crossing people on two dimensions may reduce or eliminate the perceptual boundary that simple categorization induces. Enhanced perceived similarity may be one cause of this weakened perceived boundary. However, Diehl (1990) suggested that a similar outgroup may be more strongly discriminated against than a dissimilar outgroup, thus awareness of common membership as opposed to awareness of similarities could be the vital source of less derogatory attitudes towards "half-outgroups".

Tajfel (1982, p. 30) suggested the insightful but untested hypothesis that reduced discrimination in crossed conditions may result from a breakdown in the perceived homogeneity of the outgroup. He quoted studies which suggest reduction of intergroup discrimination through individuation of the outgroup (e.g., Wilder, 1978). However, some studies suggest splitting up the ingroup and mixing ingroup members with non-group members, to decrease the salience of group identity and hence destroy the group boundary (e.g., Reicher, 1984). Therefore, it is hard to know whether decreased group salience or decreased

perceived homogeneity is responsible for any reduction in bias. No empirical evidence has yet been put forward to test either hypothesis. The present study tests Tajfel's hypothesis that criss-cross categorizations break down the perceived homogeneity of the outgroup. Research incorporating measures of perceived variability within in- and outgroups has been reviewed in the preceding chapter. It identified both a consistent tendency to view ingroups as more variable than outgroups (see Linville, Salovey & Fischer, 1986; Park & Judd, 1990; Park, Judd & Ryan, 1991: Quattrone, 1986), and evidence that this "outgroup homogeneity effect" can be replaced by an "ingroup homogeneity effect" when the ingroup is a minority and the outgroup a majority (e.g., Brown & Smith, 1989; Simon, in press; Simon & Brown, 1987).

This chapter reports two studies carried out to investigate crossed categorization and discrimination between realistic groups. The first study (Study 4.1) reported in this chapter compared evaluations of targets described in terms of two orthogonal categorization dimensions, religious and national identity. The second study (Study 4.2) added a further categorization, linguistic identity, and included measures of personal and collective self-esteem. Both studies also extended previous research by considering perceptions of variability as well as central-tendency measures of intergroup evaluation. To summarize, both of the reported studies tested the hypothesis that intergroup discrimination is reduced, or even eliminated, when targets share group membership with subjects in terms of at least one categorization dimension. Evaluations are expected to be most positive for a double ingroup, and least positive for a double outgroup. Both studies also tested the hypothesis that crossed categorization would be associated with a decrease in perceived group homogeneity. Finally, Study 4.2 tested the link between intergroup discrimination and self-esteem in crossed categorization situations (see later).

## 4.2 STUDY 4.1.

### 4.2.1 METHOD.

#### 4.2.1.1 Subjects.

The subjects were sixty-five Hindu (18 female, 47 male) and 63 Muslim (26 female, 37 male) students of the University of Rajshahi, Bangladesh. Age ranged from 19 to 25, with a mean of 22.4 years (SD = 1.65) for Hindu subjects and from 18 to 24, with a mean of 21.6 years (SD = 1.13) for Muslim subjects.

#### 4.2.1.2 Design.

It has already been mentioned that studies on this issue may encounter the problem of whether crossed categorization situations result in cognitive overload and thus no longer fulfil the function of systematizing and simplifying the social environment (Tajfel, 1978). However, a number of studies obtained their data employing purely within subjects designs (e.g., Brewer et al., 1987; Deschamps & Doise, 1978; Hagendoorn & Henke, 1991; Vanbeselaere, 1987; 1991; Vanman, 1990). To minimize this problem others deployed a mixed design (e.g., Brown & Turner, 1979; Diehl, 1990). The reported study sought to overcome this difficulty by using a completely between-subjects design. Therefore, subjects were assigned to the eight cells of a 2 (religious group of subjects: Hindu/Muslim) x 4 (categorization condition) between-subjects design. The four categorization conditions were created by criss-crossing two dichotomous dimensions, religious (Hindu/Muslim) and national (Bangladeshi/Indian) identity: (1) 'double ingroup' (religion similar/country similar); (2) and (3) 'crossed categorization' (religion similar/country different, and religion different/country similar); and (4) 'double outgroup' (religion different/country different). The number of subjects per cell ranged from 15 to 17.

4.2.1.3 Pilot study.

A pilot study (n = 50 Hindus and 50 Muslims) had been conducted, using subjects from the same population, to identify a set of relevant adjectives that were not assigned stereotypically to one religious or national group, and so could be used to rate all four targets. This was needed because, when measures of perceived variability are used, some studies suggest that ingroup homogeneity effects occur on ingroup-typical dimensions and outgroup homogeneity effects occur on outgroup-typical dimensions (see Simon, in press). To simplify the design, such dimensions were avoided.

4.2.1.4 Stimulus materials.

The questionnaires consisted of three sections. In the first part of the questionnaire, subjects rated their assigned target (e.g., "Hindus in Bangladesh") on five evaluative adjectives ("aggressive", "patriotic", "dominating", "hospitable" and "selfish") presented with seven point scales. These scales were anchored with the terms "not at all characteristic" (1) and "very characteristic" (7).

As has been discussed in chapter 3, there are multiple measures of perceived group variability from which to choose. In order to assess the perceived distribution of the group about its central tendency, subjects completed Linville et al.'s (1986; see p. 190) indirect measure of variability, known as a "distribution task". The same five traits were used for this purpose. Each of these traits was presented with eight boxes (levels). Each attribute dimension was numbered from 1 to 8 and labelled at each end with the poles of "not at all applicable" (1), "very much applicable" (8). For each trait, subjects were asked to consider 100 members of the target groups drawn at random, and to estimate how many of them would fall into each of eight boxes (levels). They were also asked to ensure that their distribution summed to 100.

One possible limitation of indirect measures like the "distribution task" is that subjects might focus on their scores adding up to 100 and this could affect the main estimation task (see Park & Judd, 1990). Therefore, subjects also completed a direct measure of perceived variability. One statement was presented, with a seven point scale, for a global judgment of how similar members of their target group were to one another ("they're all completely different from one another" (1); "they're pretty much alike" (7); Quattrone & Jones, 1980).

In each of three sections of the questionnaire the relevant target group (Bangladeshi Hindu; Bangladeshi Muslim; Indian Hindu; and Indian Muslim) was highlighted by mentioning the group specifically.

4.2.1.5 Procedure.

Four large halls of residence were selected for conducting this study. Full residence lists were collected and subjects were selected by a simple randomization technique. Fewer than 5 percent of randomly selected subjects from each group were unwilling to take part in the study. Questionnaires were distributed on an individual basis at the hall of residence, by an experimenter of the same religious group as the subject, and were collected within the hour. All questionnaires were completed anonymously. Originally 65 questionnaires were distributed to each group; although Hindu subjects returned all questionnaires, one Muslim subject did not return the questionnaire and one returned an unanswered questionnaire. Therefore, these two subjects (3%) were excluded from the study.

### 4.2.3 RESULTS AND DISCUSSION.

#### 4.2.3.1 Overview.

The data were analysed separately for evaluations and for perceived group variability. 2 (sex) x 2 (religious group of subjects) x 4 (categorization condition) between-subjects analyses of variance (ANOVAs) for target group evaluation and perceived group variability indicated no significant effects of sex of subject, so this factor was dropped from the analyses.

#### 4.2.3.2 Target-group evaluations.

Responses to the negative adjectives (aggressive, dominating and selfish) were recoded, so that higher scores denote positive evaluations, and then ratings were averaged to form reliable indices. The internal consistency (Cronbach's alpha) of these evaluative trait ratings was .859, for Hindus; and .700, for Muslims. A 2 (religious group of subjects) x 4 (categorization condition) between-subjects analysis of variance (ANOVA) revealed only a significant main effect for categorization condition, $F(3, 120) = 65.52$, $p < .0001$, although the main effect for subjects' religious group was marginally significant, $F(1,120) = 3.11$, $p < .08$. Means and standard deviations for target group evaluations are reported in Table 4.1.

As can be seen from Table 4.1, neither group of subjects showed discrimination against a target group that was similar on the religious dimension, but different on the nationality dimension (compared with evaluation of the double ingroup). In contrast, when the group was different on the religious dimension, but similar on the nationality dimension, discrimination was evident, but still weaker than the negative evaluation of the double outgroup (although this double-outgroup effect was only statistically significant for the Muslims).

Table 4.1 Means and Standard Deviations of Target Group Evaluation as a Function of Categorization Condition and Religious Group of Subjects (study: 4.1)

| | **Categorization of Target Group** | | | |
|---|---|---|---|---|
| | **Religion** | | | |
| | Ingroup | | Outgroup | |
| | **Country** | | | |
| Religious group of subject/ Evaluation | Ingroup | Outgroup | Ingroup | Outgroup |
| **Hindu** | (*n* = 16) | (*n* = 16) | (*n* = 16) | (*n* = 17) |
| Mean | 5.62 a | 5.00 a | 2.75 b | 2.09 b |
| SD | 1.40 | 1.26 | .90 | 1.42 |
| **Muslim** | (*n* = 16) | (*n* = 16) | (*n* = 15) | (*n* = 16) |
| Mean | 5.40 a | 5.15 a | 3.41 b | 2.81 c |
| SD | .63 | .71 | .99 | .61 |
| **Both** | | | | |
| Mean | 5.51 a | 5.07 a | 3.07 b | 2.45 c |
| SD | 1.08 | 1.01 | .99 | 1.14 |

Note. A higher number indicates a more positive evaluation (on 7 point scale). Means that do not share a common letter are significantly different (Newman-Keuls test, $p < .05$).

These results indicate the salience of the religious, compared with the national, categorization. A further analysis was computed to comprehend the relative strength of these two crossed dimensions. A 2 (religious group of subjects: Hindu/Muslim) x 2 (religion: similar/different) x 2 (country: similar/different) between-subjects ANOVA was conducted. This analysis revealed no main effect for subjects' group ($F(1,120) = 3.11, p < .08$), but showed that the size of the religious target-group effect ($M$s = 5.29 vs 2.75), $F(1,120) =$

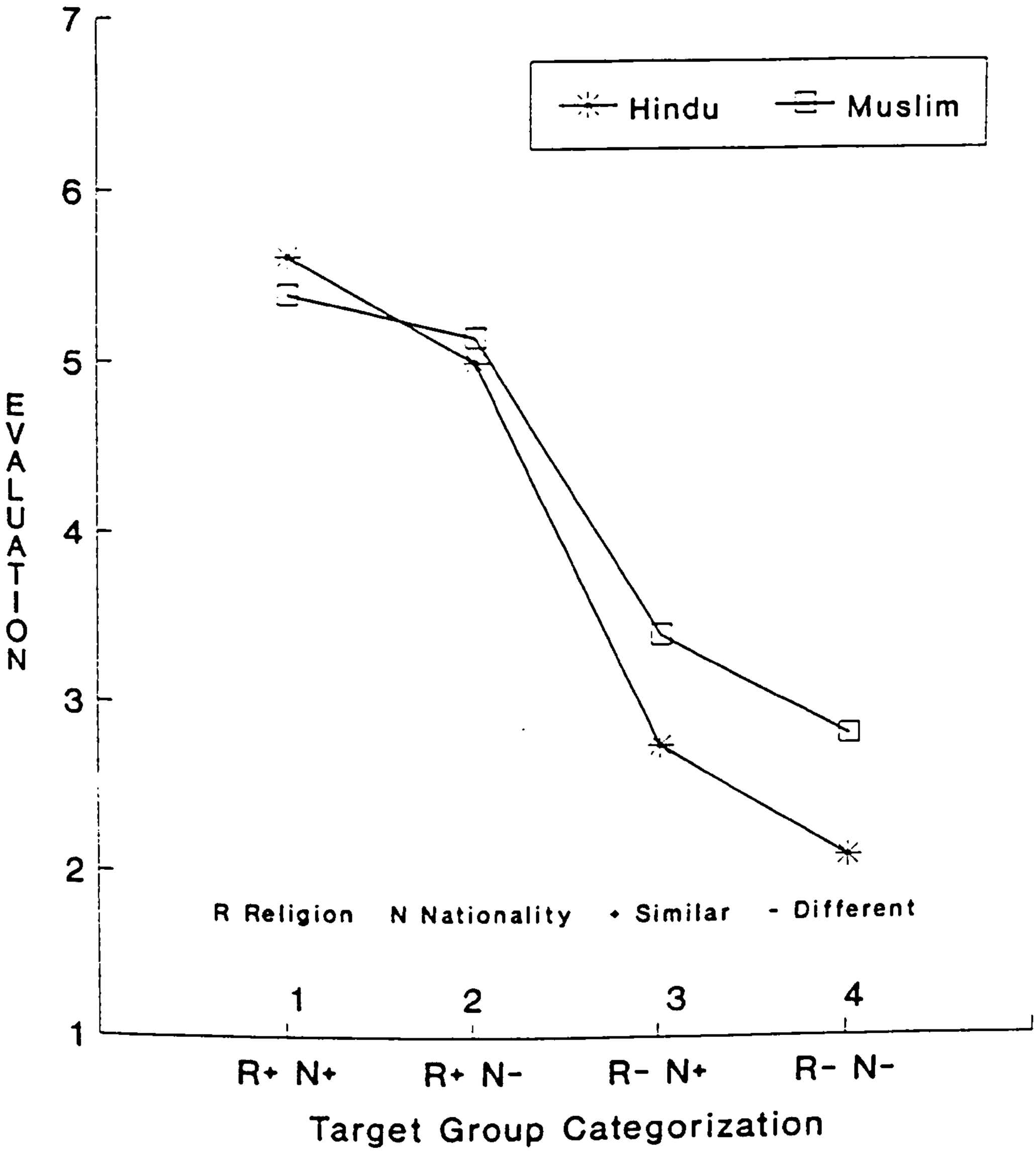


FIGURE 4.1 Mean adjective ratings by Hindu and Muslim subjects in different crossed-categorization conditions (Study: 4.1)

186.74, $p < .0001$, was much greater than that of the country target-group effect ($M$s = 4.31 vs 3.74), $F(1,120) = 8.27, p < .005$. There was a significant two-way interaction between the religious group of subjects and the religious group of targets, $F(1,120) = 3.83, p < .05$, indicating that target groups with a different religious identity were evaluated more negatively by Hindu ($M$ = 2.42) than Muslim respondents ($M$ = 3.11).

These results offer partial support for the category differentiation model, which predicts no discrimination against "half outgroups". This prediction holds, for both groups of subjects, only when the half outgroup shares religious categorization, not when it shares national categorization. There is, therefore, some support for the social identity account, which predicts discrimination against half outgroups, but this prediction is only supported for targets who differ in terms of religious categorization. Thus the pattern of results is best explained by the category dominance model, with religious categorization dominating national categorization. The strong claim of this last model is not, however, upheld, because categorization based on the subordinate categorization dimension is not ignored. Finally, there is evidence of strongest discrimination against a double outgroup (as predicted by category differentiation and social identity perspectives), only for Muslim subjects. This result could also be interpreted as a reversal of the hierarchical ordering model, since Muslims differentiated same- and different-country targets only when the target was categorized as outgroup on the first (religious) dimension ($M$s = 3.41 vs 2.81).

4.2.3.3 Perceived group variability.

For each subject the probability of differentiation (Pd) and standard deviation (SD) were calculated from the frequency distribution. Pd was computed by the formula, $Pd = \sum 1 - P_i^2$, where i denotes the level of the dimensional attribute in question and $P_i$ denotes the probability for the i-th level of the attribute. For

example, when a subject used all eight boxes (levels) and distributed numbers 10, 10, 10, 40, 15, 05, 05 and 05 respectively, Pd then equals:

$$1 - (0.1^2 + 0.1^2 + 0.1^2 + 0.4^2 + 0.15^2 + 0.05^2 + 0.05^2 + 0.05^2) = .78.$$

Since 8 point scales were used, Pd could theoretically range from 0 to 0.875. A higher value indicates a higher probability of differentiation, or greater perceived variability. According to Linville et al. (1986, p. 167), Pd reflects the probability that two randomly chosen group members will be perceived to differ in terms of the attribute(s) in question. SD on the other hand refers to the degree to which group members are perceived to be widely dispersed in terms of the attribute(s) in question. The measure of similarity (SIM) indicates global perceived homogeneity.

Factor analysis on all five Pd scores revealed one unrotated factor for each group with an eigenvalue of 3.42, accounting for 68.3 per cent of variance with factor loadings higher than .62 for Hindus and, for Muslims, an eigenvalue of 3.06, accounting for 61.2 per cent of the variance with factor loadings higher than .50. Similarly factor analysis on the five SD scores confirmed one unrotated factor which had a large eigenvalue for each group (3.38 and 2.67) and accounted for a high percentage of variance (68% and 53%) with the factor loadings higher than .77 and .56 for Hindus and Muslims, respectively. Thus, data were collapsed across trait dimensions (Cronbach's alpha for Pd and SD, respectively = .882 and .879 for Hindus; .832 and .775, for Muslims).

Two out of three simple correlations between the measures were significant, but here, for completeness, analyses for each measure are reported separately (Pearson product-moment correlations ($n$ = 128): Pd and SD, $r$ = .563, $p$ <.001; Pd and SIM, $r$ = -.016, *n.s.*; SD and SIM, $r$ = -.146, $p$ <.05). Park and Judd's (1990) comparative study suggests that Pd and SD measures are highly positively correlated. They reported only a marginally significant

correlation ($p$ <0.05) between SD and SIM measure but no correlation between Pd and SIM. Their results are therefore quite consistent with the reported findings.

To investigate the overall factor structure of variability measures, separate factor analyses were conducted for each group on three perceived variability measures: Pd, SD and SIM. Two factors emerged with eigenvalues of 1.64 and 1.01 for Hindus, accounting for 54 and 34 per cent of variances for factor 1 and 2, respectively. Pd and SD were loaded on factor 1 (loadings .91 and .89, respectively) and SIM was loaded on factor 2 (loading .99). Although a single unrotated factor emerged for Muslims, the eigenvalue was low (1.54) and accounted for only 51 per cent of variance with factor loadings of .82, .86 and -.36 for Pd, Sd and SIM, respectively. Taken together it is evident that while factor 1 reflects dimensional variability, factor 2 can be clearly labelled as general variability (Quattrone, 1986).

A 2 (religious group of subjects) x 4 (categorization condition) between-subjects ANOVA revealed no significant differences for the Pd measure (see Appendix E). In Park and Judd's (1990) analysis Pd measures showed the weakest outgroup homogeneity effect. From latent-variable analysis they concluded that SDs from the distribution task were relatively good measures of perceived dispersion (see p. 187)[3]. However, for the SD measure none of the main effects was significant but there was a significant religious group of subjects x categorization condition interaction, $F(3,120) = 2.73, p < .05$. As Table 4.2 shows, for the Muslim subjects there were no differences in perceived variability as a function of categorization condition. The Hindus, however, viewed the double ingroup (Hindus in Bangladesh; $M = 1.41$) as especially homogeneous in comparison with both half-outgroups, that is, Hindus in India ($M = 1.83$) and Muslims in Bangladesh ($M = 1.85$), but not more homogeneous than the

Table 4.2 Means and Standard Deviations of Perceived Group Variability as a Function of Categorization Condition and Religious Group of Subjects (study: 4.1)

| | **Categorization of Target Group** | | | |
|---|---|---|---|---|
| | **Religion** | | | |
| | Ingroup | | Outgroup | |
| | **Country** | | | |
| Religious group of subject/ Dependent measure | Ingroup | Outgroup | Ingroup | Outgroup |
| **Hindu** | | | | |
| Pd | .59 a (.21) | .61 a (.13) | .67 a (.15) | .65 a (.18) |
| SD | 1.41 a/1 (.75) | 1.83 b/1 (.44) | 1.85 b/1 (.42) | 1.78 ab/1 (.54) |
| Similarity | 5.87 a/1 (.96) | 3.81 b/1 (2.34) | 5.75 a/1 (1.24) | 5.56 a/1 (1.86) |
| **Muslim** | | | | |
| Pd | .72 a (.08) | .63 a (.16) | .64 a (.15) | .65 a (.11) |
| SD | 1.78 a/2 (.26) | 1.62 a/1 (.60) | 1.66 a/1 (.43) | 1.58 a/1 (.24) |
| Similarity | 3.21 a/2 (1.89) | 5.25 a/2 (1.29) | 5.07 b/1 (1.44) | 5.33 b/1 (.62) |

Note. A higher number indicates higher probability of differentiation (Pd), standard deviation (SD) and perceived similarity within the group. Range of scores: Pd, 0 to .875; SD, 0 to 3.50; Similarity, 1 to 7. (a, b) are horizontal between-target group and (1, 2) are vertical, between-respondent group comparisons on the same variable. Means within each row or column that do not share a common letter or number are significantly different (horizontal: Newman-Keuls test, $p < .05$, and vertical: Fisher's LSD simple main effect test, $p < .05$).

double outgroup (i.e., Muslims in India, $M = 1.78$). This result can be interpreted as an ingroup homogeneity effect for a minority, compared with perceptions of two majorities. This effect is also shown by the fact that Hindus view the double ingroup as less variable than do Muslims.

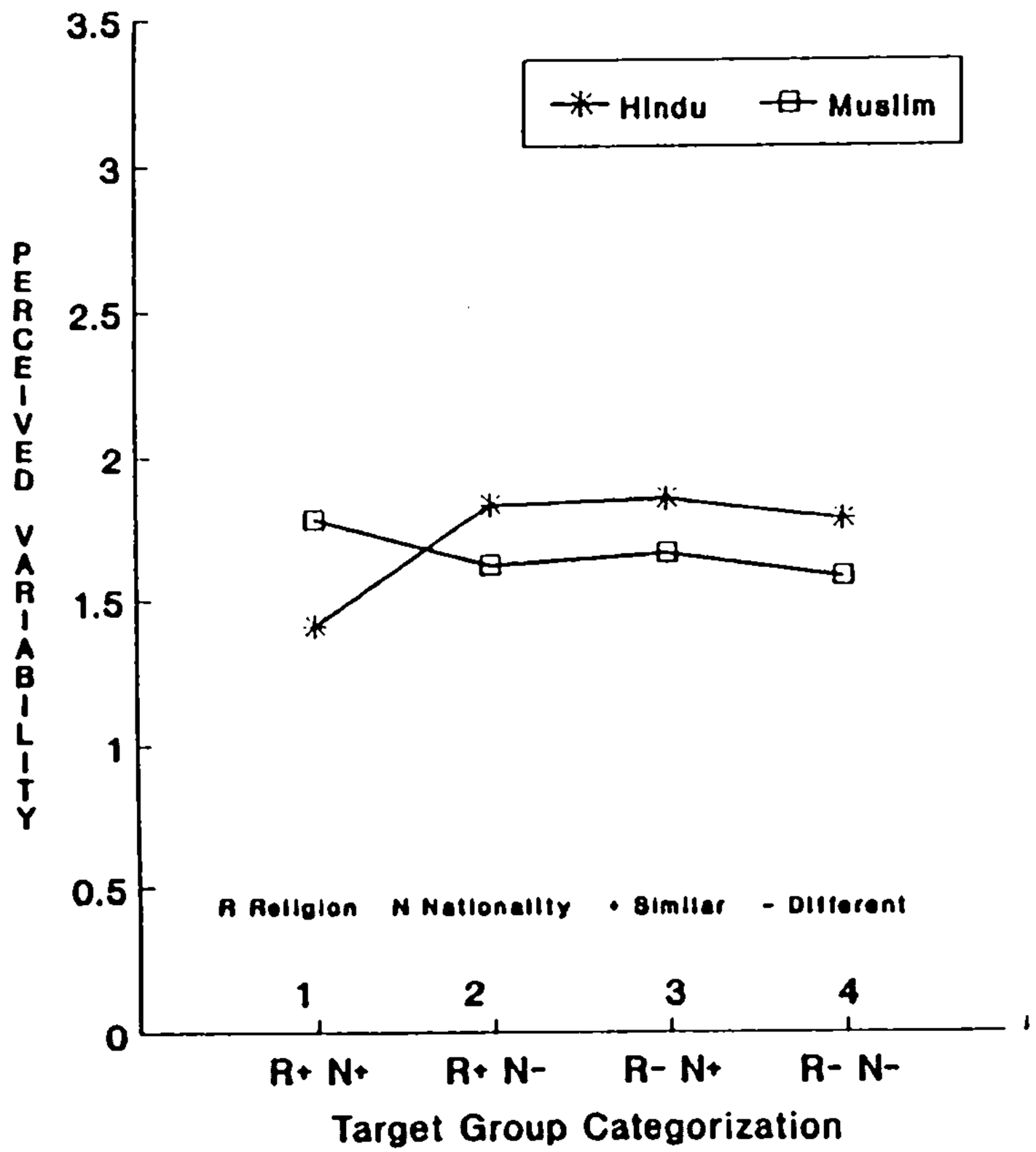


FIGURE 4.2 Perceived variability (SD) judgements by Hindu and Muslim subjects in different crossed-categorization conditions (Study: 4.1)

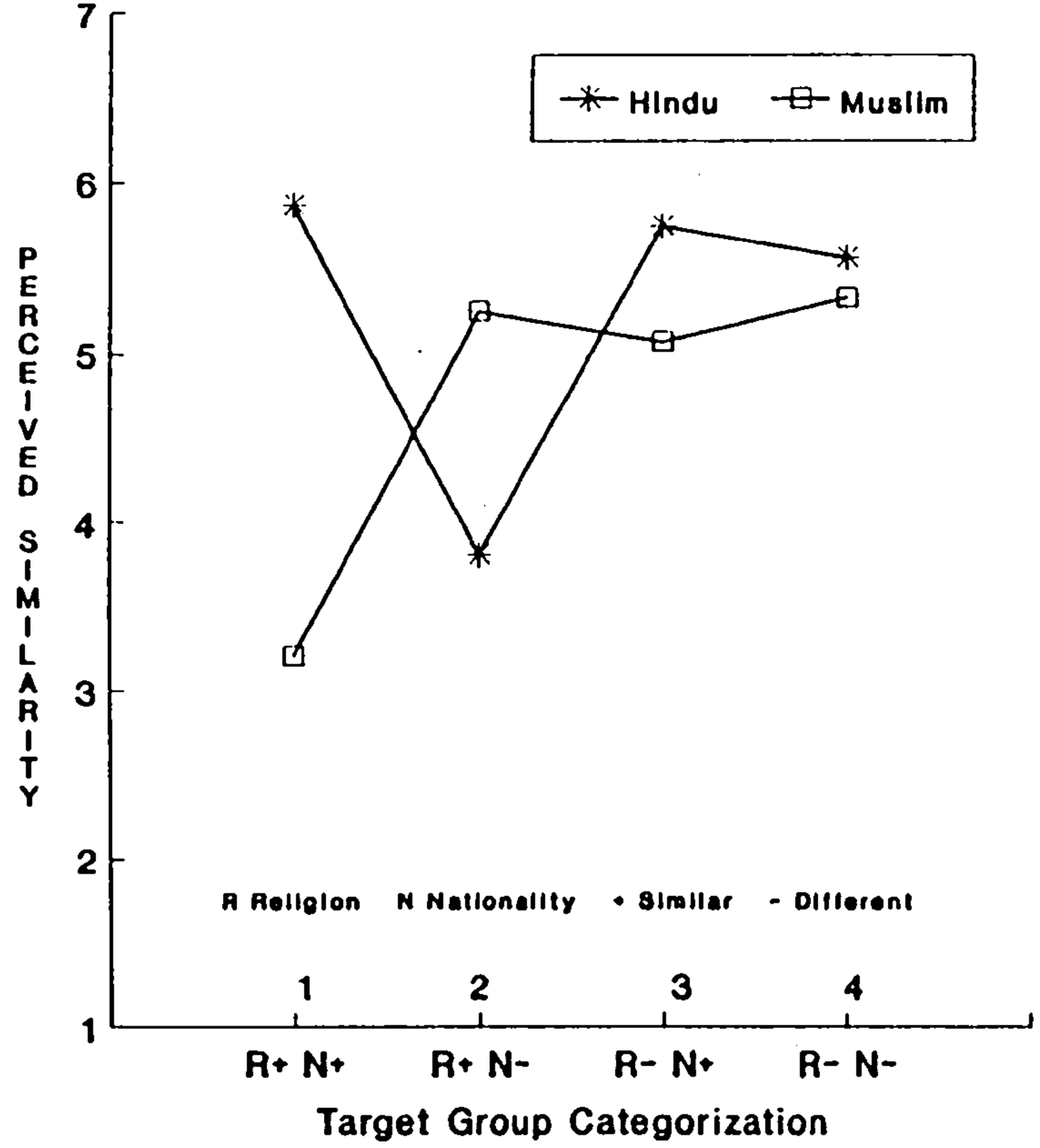


FIGURE 4.3 Perceived similarity ratings by Hindu and Muslim subjects in different crossed-categorization conditions (Study: 4.1)

Jones, Wood and Quattrone (1981) suggested that extreme trait ratings would be associated with low perceived variability owing to the restrictions imposed by the scale endpoints. If the average group member is given an extreme trait rating then there is more restriction on the range of values attributable to the group than when the average group member is given a more central trait rating. The absolute distance from the mean of the frequency distributions to the scale midpoint (i.e., 4) was used as the extremity measure. Then the extremity measures for five scales were averaged (evidently, the extremity measures for aggressive, dominating and selfish were recoded: Cronbach's alphas = .683 and .648 for Hindus and Muslims, respectively). Then analyses of covariance (ANCOVAs) using the Pd and SD as dependent variables and extremity measures as covariate were performed. The findings of the main analysis were replicated in ANCOVAs for both Pd and SD. Although none of the main or interaction effects were found to be significant for Pd, the two-way interaction between religious group of subjects and categorization condition was significant for SD, ($F(3,119) = 2.86$, $p < .04$). Thus, differences in perceived variability are not associated with differences in rating extremity.

A 2 (religious group of subjects) x 4 (categorization condition) ANOVA computed on the similarity measure revealed significant main effects for both religious group of subjects, $F(1,118) = 4.07$, $p < .05$, and categorization condition, $F(3,118) = 3.62$, $p < .02$. These main effects were qualified by a significant religious group x categorization interaction, $F(3,118) = 9.86$, $p < .0001$. This interaction supports the findings using the SD measure. Hindus viewed Hindus in India (a majority) as less similar than all other targets. Muslims viewed the double ingroup (a majority) as less similar than all the other target groups. Once again, the between-subjects' group comparison revealed Hindus ($M = 5.87$) perceived the double ingroup to be more similar than did Muslims ($M =$

3.12). In addition, Hindus perceived Hindus in India (majority, $M$ = 3.81) as less similar to one another than Muslims perceived Muslims in India (minority, $M$ = 5.25).

Overall, the findings on perceived variability provide no support for the hypothesis that "criss-cross" categorizations break down the perceived homogeneity of outgroups (Tajfel, 1982). Instead, the results are consistent with some previous studies which suggest that members of minority groups may perceive more homogeneity within the ingroup than within the outgroup (Brown & Smith, 1989; Mullen & Hu, 1989; Simon & Brown, 1987; Simon & Pettigrew, 1990).

To summarize, Study 4.1 replicated previous research showing that intergroup discrimination can be reduced by crossing category memberships, although this effect was only found when the dominant categorization dimension (religion), and not the subordinate dimension (nationality), was shared. These results are best explained in terms of the category dominance model (Brewer et al., 1987), rather than category differentiation or social identity models, and there was only partial support for their predicted additive effect of two categorizations. Finally, there was no support for the predicted impact of crossed categorization on outgroup homogeneity. The data on perceived group variability were more interpretable in terms of societal influences, namely minority and majority status.

## 4.3 STUDY 4.2

### 4.3.1 Introduction.

The second study (Study 4.2) in this series was followed up by strengthening the manipulation of crossed categorization, using a different measure of perceived variability, and subjecting the social identity account to a stricter test.

Because it was found that religion dominated nationality so strongly, the second study (Study 4.2) also manipulated linguistic categorization. In India there are 24 states, in which people speak a variety of different languages (officially, 15 regional languages are recognized, although the state language is Hindi). Bengali is spoken in only one state, West Bengal. In undivided India (i.e., pre-1947 partition), Bengal was a province which had two parts, West Bengal (still in India) and East Bengal (now Bangladesh). Both parts of undivided Bengal had only one common language, Bengali, but historically the majority in West Bengal is Hindu, with a Hindu-oriented culture. On the other hand, in East Bengal (Bangladesh), the majority and dominant culture is Muslim (see Chapter 1). Thus both parts are still linguistically similar, but in terms of religion, culture and nationality they are different. By crossing religious, national and linguistic categorization dimensions, six conditions were created ranging from a triple ingroup to a triple outgroup. Thus, this new factor provided an opportunity to test a more elaborate set of hypotheses based on crossed categorizations involving one or two dimensions. The three dimensions cannot be completely crossed, yielding eight cells, because both Hindus and Muslims in Bangladesh always speak Bengali.

Although the Study 4.1 failed to provide any evidence that crossed categorization reduced perceived outgroup homogeneity, this study used a new measure of perceived variability to provide a further test of this hypothesis. Some subjects in the Study 4.1 did report difficulties using the Linville et al. (1986)

distribution task, seeming preoccupied with summing their entries to 100. Only weak differences on the SD measure and none using Pd were reported. Therefore, an alternative measure of dispersion was used, the range (e.g., Jones, Wood & Quattrone, 1981), which Park and Judd (1990) identified as one of the least errorful of the dispersion measures, and therefore most likely to reveal small differences in perceived variability.

Finally, the second study (Study 4.2) pursued the comparison of category-differentiation and social-identity accounts of crossed categorization. The main difference between the two theories is that the category differentiation model is purely cognitive, whereas social identity theory is partly motivational. It argues that social categorization arouses self-evaluative social comparisons, whereby individuals strive to obtain a positive self-esteem. This claim implies, of course, that self-esteem must be measured. Yet, the main limitation of social identity research is that researchers have typically failed to provide a convincing test of the link between some form of intergroup discrimination and self-esteem (Messick & Mackie, 1989). Where this link has been investigated, there is little evidence of a straightforward relationship (see Abrams & Hogg, 1988, for a review). The only study to have investigated self-esteem in the context of crossed categorization is that by Vanbeselaere (1991). He found that self-esteem was higher when measured after than before evaluations, but only in simple (and not in crossed) categorization conditions. When self-esteem was measured after evaluations, no differences between categorization conditions were found, offering little support to the social identity account. Thus it appears that in crossed-categorization conditions, social categorization no longer fulfils the function of systematizing and simplifying the social environment (Tajfel & Turner, 1979), although this claim requires further validation.

Simon and Brown (1987) and Simon and Pettigrew (1990) suggested, from their laboratory-based studies, that minority group members who perceived their own groups to be more homogeneous than non-minority outgroups showed greater identification with their own group membership. Although Simon and Pettigrew (1990) provided evidence that stronger identification with own group membership was related to the ingroup being perceived as homogeneous relative to the outgroup, their findings suggest this is true only for a *well-defined* minority group. Simon and Brown (1987) concluded that social identity is the crucial mediating variable between the social context of the intergroup situation and social perception. Simon and Brown's (1987) and Simon and Pettigrew's (1990) findings clearly suggest that the perception of relative ingroup homogeneity is most likely motivated by the search for a positive social identity. However, in line with social identity theory it can also be argued that minority groups who already have a less positive (or threatened) social identity may also perceive their own group to be relatively homogeneous in order to maintain greater "groupness" and thus help to achieve or restore a positive social identity. In this study both personal and collective self-esteem scales were used to provide some information about both minority and majority groups' religious identity.

### 4.3.2 METHOD

#### 4.3.2.1 Subjects.

117 Hindu (29 females, 88 males) and 120 Muslim (38 female, 82 male) undergraduate students from the University of Rajshahi, Bangladesh participated in the study. For Hindu subjects, age ranged from 18 to 24, with a mean of 22.4 years (SD = 1.71) and for Muslim subjects, from 18 to 23, with a mean of 22.2 years (SD = 1.70).

4.3.2.2 Design.

A 2 (religious group of subjects: Hindu/Muslim) x 6 (categorization condition) between-subjects design was used for this study. The six categorization conditions were created by criss-crossing three dichotomous dimensions, religious (Hindu/Muslim), national (Bangladeshi/Indian) and linguistic (Bengali/non-Bengali) identity. Conditions were (1) 'completely ingroup' (religion similar/country similar/language similar), i.e. "Muslims in Bangladesh, who speak Bengali". Conditions 2-5 involved 'crossed categorization'; in the first two conditions the target group varied on only one dimension, i.e. (2) religion similar/country different/language similar and (3) religion different/country similar/language similar); in the last two conditions, the target group varied on two dimensions, i.e. (4) religion similar/country different/language different and (5) religion different/country different/language similar. The final condition, (6), was 'completely outgroup' (religion different/country different/language different). The number of subjects assigned per cell ranged from 19 to 22.

4.3.2.3 Stimulus materials.

The first part of the questionnaire consisted of 12 bipolar evaluative adjectives which were not stereotypically associated with religious, national or linguistic groups. The 12 adjectives (6 positive and 6 negative), were "honest", "aggressive", "patriotic", "dominating", "hospitable", "selfish", "cool-headed", "conservative", "intelligent", "opportunist", "broad-minded" and "disruptive". Subjects were asked to rate their target group on seven-point scales, anchored with the terms "not at all characteristic" (1), "very characteristic" (7).

In the second part, immediately after their general evaluation, subjects completed a self-esteem measure. Julian, Bishop and Fiedler's (1966) version of the evaluative dimension of the semantic differential was used. This consisted of nine bipolar scales, presented in the following order: pleasant-unpleasant, cold-

warm, self-assured-hesitant, inefficient-efficient, fair-unfair, bad-good, friendly-unfriendly, lazy-hard-working, close-distant. Each was rated on a 7 point scale. Although these items were originally intended to measure relatively enduring self-esteem, research suggests that transitory self-esteem is more likely to be related to intergroup evaluation than is persistent self-esteem (see Hogg & Abrams, 1990). Therefore, subjects were instructed to respond in terms of "how you feel at the moment". It was repeatedly emphasized that they should focus on their current feelings. This measure of transitory self-esteem has been used in several studies related to social identity (e.g., Hogg & Sunderland, 1991; Oakes & Turner, 1980; Vanbeselaere, 1991).

In the third part of the questionnaire, perceived group variability was measured by presenting subjects with the same 12 adjectives. Adjectives were presented followed by a 100 mm line. These 12 scales were anchored with the end-points "extremely" and "not at all". Subjects were asked to make a slash where, on average, on each of the 12 dimensions, the target group fell. On the same scales, subjects were then asked to mark where the most and least extreme target-group members would fall, by making two shorter slashes. The difference between the rated extremes (full range) was calculated on each dimension.

Finally, to provide some confirmation of the importance of religious identity, subjects completed a collective self-esteem measure (Crocker & Luhtanen, 1990; Luhtanen & Crocker, in press) highlighting respondents' religious social identity. This measure consisted of 16 seven-point scales ("strongly disagree", 1, and "strongly agree", 7) equally divided into four sub-scales: membership (evaluations of oneself as a member of the social group(s) to which one belongs), private (to what extent one evaluates one's social groups positively), public (how others evaluate one's social groups) and identity (how important one's membership in the social group is to one's self-concept), which

assess various aspects of collective self-esteem. This measure was closely based on the three aspects of social identity noted by Brown and colleagues: (a) awareness and (b) evaluation of own group membership and (c) affect associated with the membership (see Hinkle & Brown, 1990). Even though the affective significance of one's group membership is not explicit in the scale, it was expected that the scale would be able to assess the importance of religious identity for both dominating and dominated groups in this context.

In the first and third parts of the questionnaire, where subjects were instructed to give general evaluations and perceived variability judgements of the target group, the relevant target group, with its crossed categorization structure (i.e. Bangladeshi Hindu, who speaks Bengali or Indian Muslim, who does not speak Bengali) was made clear.

4.3.2.4 Procedure.

A full departmental student list of the university was collected. Eight departments were selected for conducting this study because of their sizeable number of Hindu students. Then subjects were selected by a simple randomization technique. Questionnaires were distributed on an individual basis at the university, by an experimenter of the same religious group as the subject, and were collected within the hour. All questionnaires were completed anonymously. Originally 125 questionnaires were distributed to the randomly selected students of each group. But five Hindu subjects failed to return their questionnaires, and three returned totally unanswered questionnaires. Three Muslim subjects did not return their questionnaires and two returned their questionnaires completely unanswered. Therefore, these subjects (6.5% Hindu and 4% Muslim) were excluded from the study.

### 4.3.3 RESULTS AND DISCUSSION.

#### 4.3.3.1 Overview.

The data were analysed separately for evaluations, perceived group variability and self-esteem. As preliminary analysis indicated there were no significant effects of sex of subject, this factor was dropped from the main analysis.

#### 4.3.3.2 Target-group evaluations.

Responses to the negative adjectives were recoded, so that higher scores denoted positive group evaluations, and then all the ratings were averaged to form reliable indices (Cronbach's alpha = .875 for Hindus, and .888 for Muslims). A 2 (religious group of subjects) x 6 (categorization condition) between-subjects ANOVA revealed a significant main effect for categorization condition, $F(5,225) = 35.07$, $p < .0001$, which was qualified by a significant religious group x categorization condition interaction, $F(5,225) = 3.20$, $p < .008$. Means and standard deviations for target group evaluations are reported in Table 4.3.

As can be seen from Table 4.3, Hindus evaluated the target group that shared religious and linguistic categorization as positively ($M = 4.84$) as the triple ingroup ($M = 5.28$). This was not true, however, for the target group that shared both national and linguistic, but not religious, categorization ($M = 3.23$). This latter "double-crossed" group was, in fact, evaluated less positively than a target group that shared only religious categorization ($M = 4.21$). However, as can also be seen from Table 4.3, evaluations of the last four target groups were generally similar, and different from those of the first two groups (triple ingroup and group sharing common religious and linguistic identity). Muslim subjects favoured the "triple ingroup" ($M = 5.58$) over all other target groups, but also tended to favour other groups that shared religious categorization, that is target groups 2 ($M = 4.92$) and 4 ($M = 4.96$) over groups that did not, that is, 3 ($M =$

3.80), 5 ($M$ = 3.43) and 6 ($M$ = 3.16). However, the "triple outgroup" was generally evaluated most negatively ($M$ = 3.16), although the group sharing only linguistic identity was evaluated as negatively ($M$ = 3.43) as the "triple outgroup".

Table 4.3 Means and Standard Deviations of Target Group Evaluation as a Function of Categorization Condition and Religious Group of Subject (study: 4.2)

| | **Categorization of Target Groups** | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Religious Group of Subject/ Evaluation | **R N L**<br>**+ + +** | **R N L**<br>**+ - +** | **R N L**<br>**- + +** | **R N L**<br>**+ - -** | **R N L**<br>**- - +** | **R N L**<br>**- - -** |
| **Hindu** | ($n$ = 19) | ($n$ = 19) | ($n$ =22) | ($n$ = 19) | ($n$ = 19) | ($n$ = 19) |
| Mean | 5.28 a/1 | 4.84 a/1 | 3.23 b/1 | 4.21 c/1 | 3.56 bc/1 | 3.82 bc/1 |
| SD | .88 | .80 | 1.02 | .76 | 1.03 | 1.08 |
| **Muslim** | ($n$ = 20) | ($n$ = 19) | ($n$ =21) | ($n$ = 20) | ($n$ = 19) | ($n$ = 21) |
| Mean | 5.58 a/2 | 4.92 b/1 | 3.80 c/2 | 4.96 b/2 | 3.43 cd/1 | 3.16 d/2 |
| SD | .43 | 1.02 | .97 | .78 | .86 | 1.01 |

Note. R, denotes religion; N, Nationality; L, language; +, similar, -, different. Higher numbers indicate positive evaluations (on 7 point scale). (a,b,c,d) are horizontal between-target group and (1,2) are vertical between-respondent group comparisons. Means within each row or column that do not share a common letter or number are significantly different (horizontal: Newman-Keuls test, $p$ <.05, and vertical: Fisher's simple main effect test, $p$ <.05).

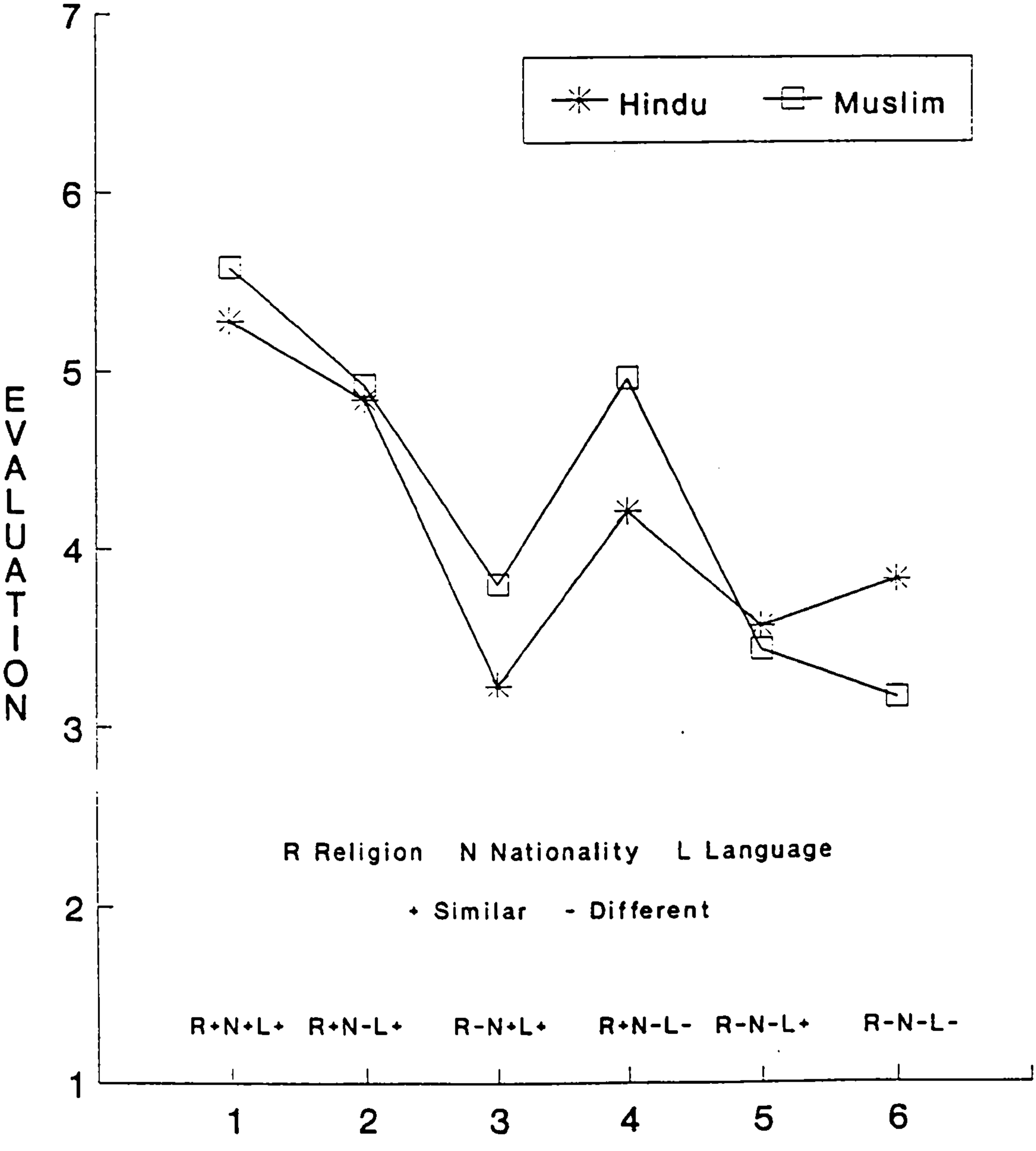


FIGURE 4.4 Mean adjective ratings by Hindu and Muslim subjects in different crossed-categorization conditions (Study: 4.2)

A significant two-way interaction effect reflects evaluative differences between the two religious groups. The "triple ingroup" target was more favoured by Muslims ($M$ = 5.58) than Hindus ($M$ = 5.28) but the "triple outgroup" was less favoured by Muslims ($M$ = 3.16) than by the Hindus ($M$ = 3.82). In addition, when religion was the only shared dimension, Muslims favoured ($M$ = 4.96) the target group more than Hindus ($M$ = 4.21) but when only the other two dimensions were shared Muslims favoured ($M$ = 3.80) the group more than Hindus ($M$ = 3.23). This last finding indicates that a secure high status group (Muslims in Bangladesh) shows comparatively less bias to a dominated social minority (Hindus in Bangladesh), replicating Vleeming's (1983) findings. The same tendency was reported in Chapter 3, where Muslims as a socio-numeric majority expressed less negative attitudes towards Hindus in Bangladesh than *vice versa*. However, this clearly contradicts several studies which suggest that intergroup discrimination should be lower among members of low-power insecure groups, but enhanced among members of high-power secure groups (e.g., Ng, 1984; Sachdev & Bourhis, 1985).

The fact that subjects discriminated in favour of the triple ingroup, compared with both single outgroups and double outgroups (except in the case of Hindus evaluating a target group sharing religious and linguistic categorization), argues against the category differentiation model and in favour of social identity theory. Contrary to both accounts, however, in a strict sense there was no evidence of additive discrimination against a triple (or double) outgroup. The overall pattern of results offers strongest support for the category dominance model, as shown by further analyses to compare the relative psychological strength of the three crossed categorization dimensions.

Two separate a priori contrasts (with oneway ANOVA on SPSSx) for Hindus and Muslims were computed to compare the conditions where religious,

national and linguistic identity were similar versus different. For the Hindus, these analyses revealed a significant contrast for religion (14.33 vs 10.61), $F(1,111) = 50.89, p < .001$. However, the contrast effects for similar versus different nationality (8.51 vs 8.21), $F(1,111) = < 1, n.s.$ and linguistic categorizations (8.45 vs 8.03), $F(1,111) = 1.30$ *n.s.* were not significant. This shows clear evidence of category dominance, where religion is the dominant dimension while the other two subordinate dimensions are completely ignored. For the Muslims, all three contrasts were significant, but religion (15.45 vs 10.39), $F(1,114) = 112.87, p < .0001$, was a relatively dominant categorization over both national (9.38 vs 8.23), $F(1,114) = 11.78, p < .001$, and linguistic (8.86 vs 8.11), $F(1,114) = 5.04, p < .027$ categorizations. As none of the subordinate categorization dimensions was ignored, this finding does not strictly support the category dominance model. However, the dominance of religion is also shown in another sense, for the Muslims, by a hierarchical ordering effect. If one examines only the conditions where linguistic categorization is shared, and then considers the impact of nationality, it is clear that Muslims differentiated same- and different-country targets only when the target was classified as an ingroup member on the religious (dominant) dimension (see Table 4.3, conditions 1 and 2 (same religion/same country: $M = 5.58$, same religion/different country: $M = 4.92$), vs 3 and 4 (different religion/same country: $M = 3.80$, different religion/different country: $M = 3.43$)).

4.3.3.3 Perceived variability.

Ratings across the 12 adjectives yielded highly reliable measures for both Hindu and Muslim groups (Cronbach's alpha = .938 and .922, respectively). Further, separate factor analysis on 12 range ratings for both Hindus and Muslims replicated this finding by extracting a single unrotated factor (with eigenvalues of 7.15 and 6.47, accounting for 59.6 and 53.9 per cent of the variance with lowest

factor loadings of .69 and .61 for Hindus and Muslims, respectively). Thus, it can be concluded that range ratings were not influenced by the different traits used and therefore permit the computation of an index, where higher scores denote higher perceived variability within the target group. Then a 2 (religious group of subjects) x 6 (categorization conditions) ANOVA was computed, which revealed a significant main effect for categorization condition, $F(5,225) = 2.69$, $p < .022$, qualified by a significant interaction between subjects' religious group and categorization condition, $F(5,225) = 2.60$, $p < .026$. Means for perceived variability ratings are presented in Table 4.4.

Table 4.4 Means and Standard Deviations of Perceived Target Group Variability as a Function of Categorization Condition and Religious Group of Subject (study: 4.2)

| | **Categorization of Target Groups** | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Religious Group of Subject/ Perceived Variability | **R N L** + + + | **R N L** + - + | **R N L** - + + | **R N L** + - - | **R N L** - - + | **R N L** - - - |
| **Hindu** | | | | | | |
| Mean | 54.8 a/1 | 58.4 a/1 | 58.0 a/1 | 57.8 a/1 | 55.7 a/1 | 52.8 a/1 |
| SD | 20.1 | 12.4 | 13.0 | 18.4 | 10.4 | 10.0 |
| **Muslim** | | | | | | |
| Mean | 66.9 a/2 | 58.0 b/1 | 50.3 b/2 | 56.1 b/1 | 51.7 b/2 | 50.4 b/1 |
| SD | 10.1 | 13.5 | 17.6 | 8.3 | 9.1 | 8.1 |

Note. R, denotes religion; N, Nationality; L, language; +, similar; -, different. Higher numbers indicate higher perceived variability within the group. Range of score, 0 to 100. (a,b,c,d) are horizontal between-target group and (1,2) are vertical between-respondent group comparisons. Means within each row or column that do not share a common letter or number are significantly different (horizontal: Newman-Keuls test, $p < .05$, and vertical: Fisher's simple main effect test, $p < .05$).

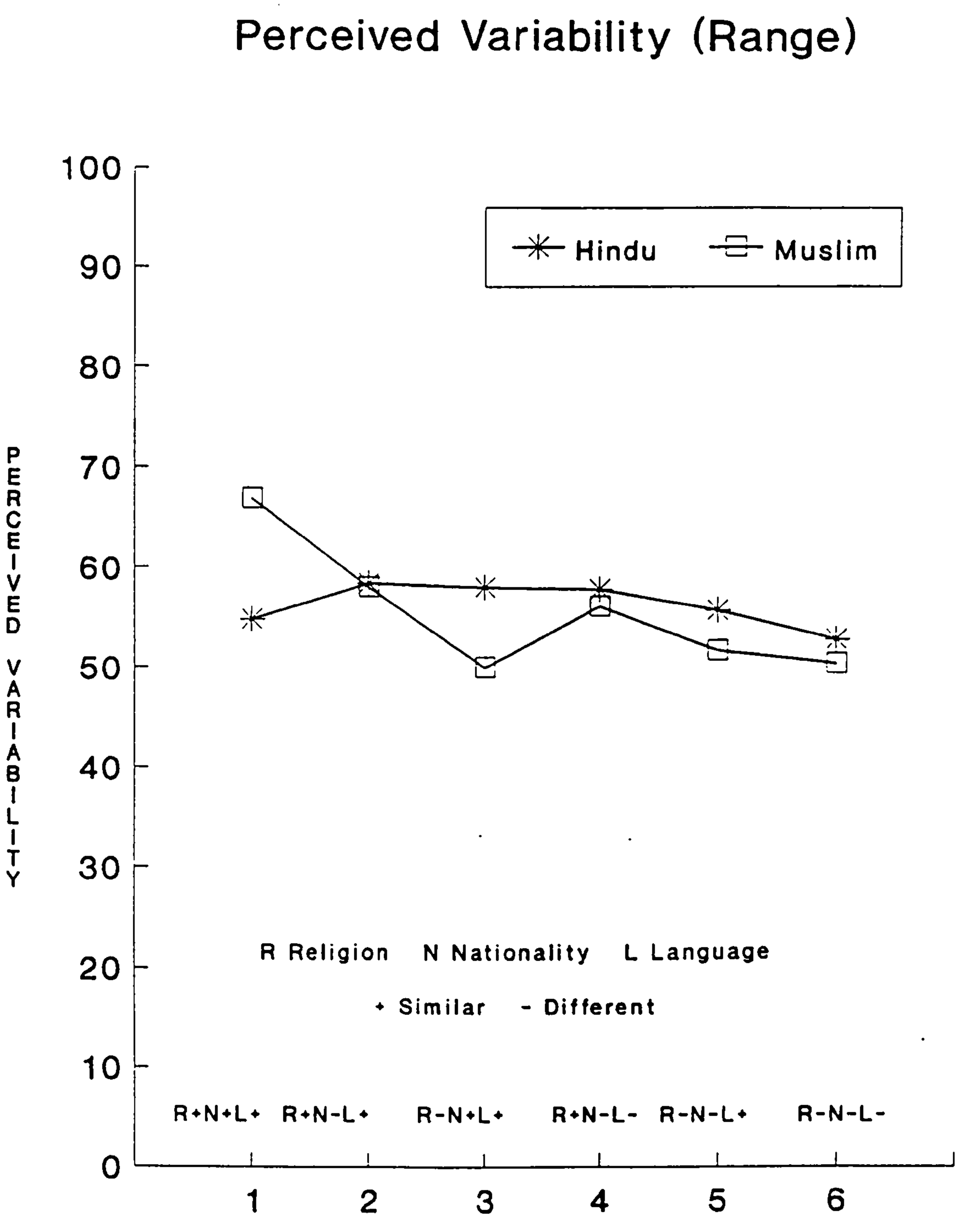


FIGURE 4.5 Perceived variability ratings by Hindu and Muslim subjects in different crossed-categorization conditions (Study: 4.2)

As can be seen from Table 4.4, Hindus rated all six target groups equally variable. Muslims, in contrast, perceived the triple ingroup to be more variable than all the other target groups (i.e., an outgroup homogeneity effect).

In addition, Hindus and Muslims differed in their perceptions of the variability of three of the six target groups. Firstly, Hindus perceived the triple ingroup ($M$ = 54.8) to be less variable than did Muslims ($M$ = 66.9), which could be interpreted as an "ingroup homogeneity effect" for Hindus (the minority in Bangladesh). Secondly, Hindus perceived Muslims ($M$ = 58.0) in Bangladesh who speak Bengali (the majority) as more variable than Muslims perceived Hindus in Bangladesh who speak Bengali (the minority; $M$ = 50.3). Thirdly, Hindus perceived the target group sharing only linguistic categorization (i.e., Muslims in West Bengal, India) to be more variable ($M$ = 55.7) than Muslims perceived their comparable target group (i.e., Hindus in West Bengal, India; $M$ = 51.7). Both these latter effects involve perceptions of different-religion groups, viewed in each case as less variable by Muslims, and may be best interpreted as "outgroup homogeneity effects" (indicating again the salience of the religious categorization for Muslims).

Furthermore, to enquire whether these perceived variability findings were influenced by the restrictions imposed by the scale end-point a 2 X 4 ANCOVA controlling for rating extremity was computed. The absolute distance from the rated average to the scale midpoint (i.e., 50) was taken as the covariate. Then this extremity measure for all 12 scales was averaged (obviously, extremity measures for aggressive, dominating, selfish, conservative, opportunist and disruptive were recoded: Cronbach's alphas = .735 and .692 for Hindus and Muslims, respectively). Both main findings were replicated in analyses of covariance: there was a significant main effect of categorization, $F(1,224)$ = 2.61,

$p < .026$, qualified by a significant two-way religious group of respondents x categorization condition interaction, $F(5,224) = 2.63$, $p < .025$.

3.3.3.4 Self-esteem.

Ratings on the nine semantic-differential scales were recoded (cold-warm, inefficient, bad-good and lazy-hard-working), so that high scores denoted positive, personal self-esteem. Then these scores were averaged to form reliable indices (Cronbach's alpha = .806 for Hindus, and .713 for Muslims). A 2 (religious group of subjects) x 6 (categorization condition) between-subjects ANOVA revealed only a significant main effect for religious group of subjects, $F(1,225) = 25.06$, $p < .0001$ (see table 4.5), indicating higher personal self-esteem for the Muslim majority group ($M = 5.46$) than the Hindu minority ($M = 4.90$).

Table 4.5 Means and Standard Deviations of Personal Self-esteem as a Function of Categorization Condition and Religious Group of Subject (study: 4.2)

| | **Categorization of Target Groups** | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Religious Group of Subject/ Personal Self-esteem | **R N L**<br>+ + + | **R N L**<br>+ - + | **R N L**<br>- + + | **R N L**<br>+ - - | **R N L**<br>- - + | **R N L**<br>- - - |
| **Hindu** | | | | | | |
| Mean | 5.00 | 4.80 | 4.66 | 4.77 | 5.06 | 5.18 |
| SD | .98 | .85 | .96 | 1.21 | .93 | .71 |
| **Muslim** | | | | | | |
| Mean | 5.54 | 5.27 | 5.24 | 5.73 | 5.49 | 5.60 |
| SD | .64 | .87 | .85 | .53 | .94 | .88 |

Note. R, denotes religion; N, Nationality; L, language; +, similar; -, different. Higher numbers indicate higher personal self-esteem (on 7 point scale).

The 16-item collective self-esteem scale (with items recoded) also yielded reliable indices for both groups (Cronbach's alpha = .863 for Hindus, .795 for Muslims). A 2 (religious group of subjects) x 6 (categorization condition) ANOVA yielded only a significant main effect for subjects' religious group, $F(1,224) = 50.56, p < .0001$ (see Table 4.6), again revealing higher (collective) self-esteem for Muslims ($M = 5.67$) than for Hindus ($M = 4.88$).

Table 4.6 Means and Standard Deviations of Collective Self-esteem as a Function of Categorization Condition and Religious Group of Subject (Study: 4.2)

| | **Categorization of Target Groups** | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Religious Group of Subject/ Collective Self-esteem | **R N L**<br>+ + + | **R N L**<br>+ - + | **R N L**<br>- + + | **R N L**<br>+ - - | **R N L**<br>- - + | **R N L**<br>- - - |
| **Hindu** | | | | | | |
| Mean | 4.85 | 4.88 | 4.76 | 4.64 | 5.02 | 5.09 |
| SD | .81 | .72 | 1.17 | 1.09 | 1.12 | .98 |
| **Muslim** | | | | | | |
| Mean | 5.82 | 5.34 | 5.77 | 5.55 | 5.87 | 5.69 |
| SD | .74 | .91 | .55 | .51 | .68 | .72 |

Note. R, denotes religion; N, Nationality; L, language; +, similar; -, different. Higher numbers indicate higher collective self-esteem (on 7 point scale).

The measures of personal and collective self-esteem were significantly correlated in both Hindu ($r(116) = .509, p < .01$) and Muslim ($r(117) = .326, p < .01$) samples, which is consistent with reported findings by Luhtanen and Crocker (in press). For neither group did personal or

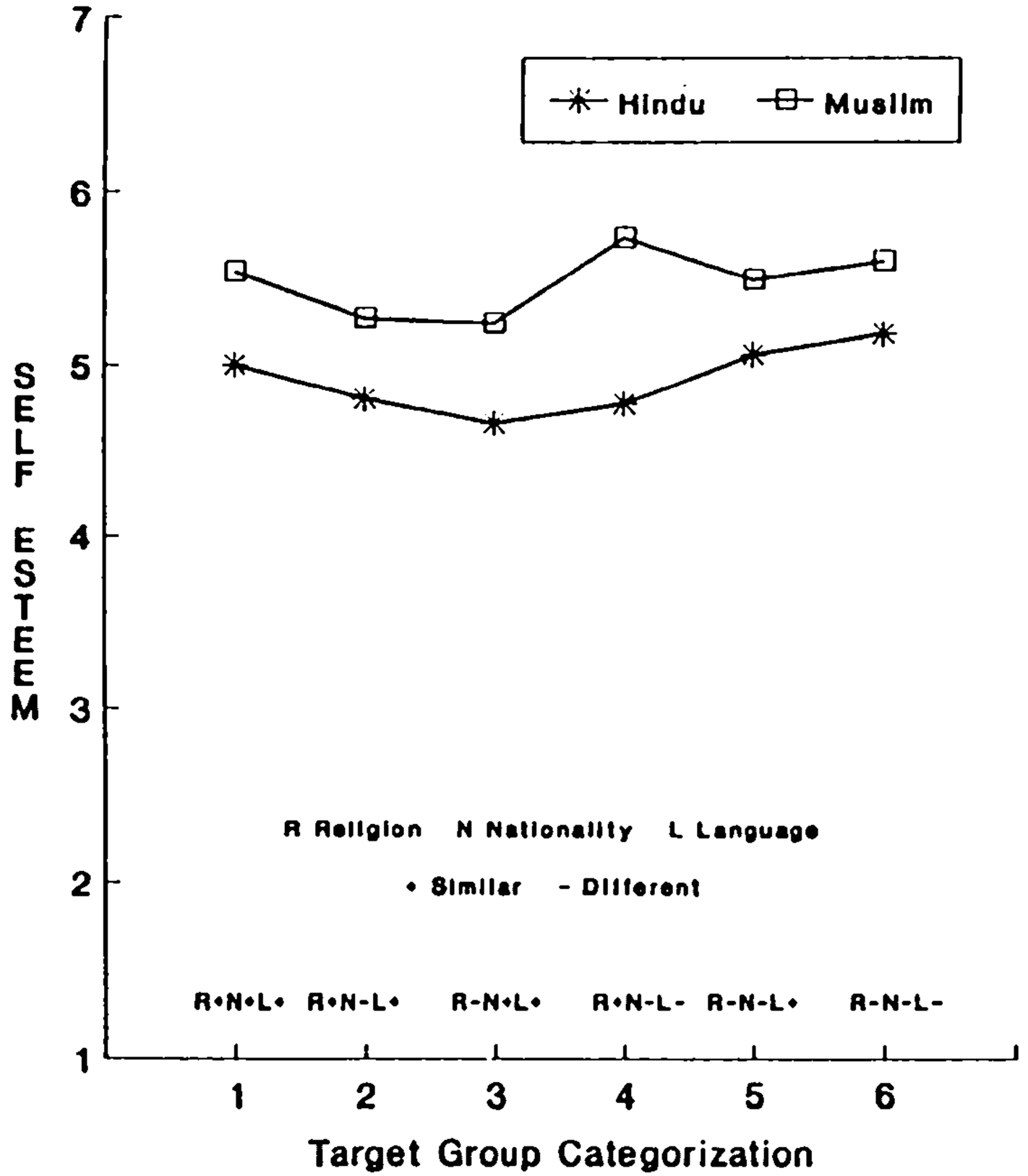


FIGURE 4.6 Personal self-esteem ratings by Hindu and Muslim subjects in different crossed-categorization conditions (Study: 4.2)

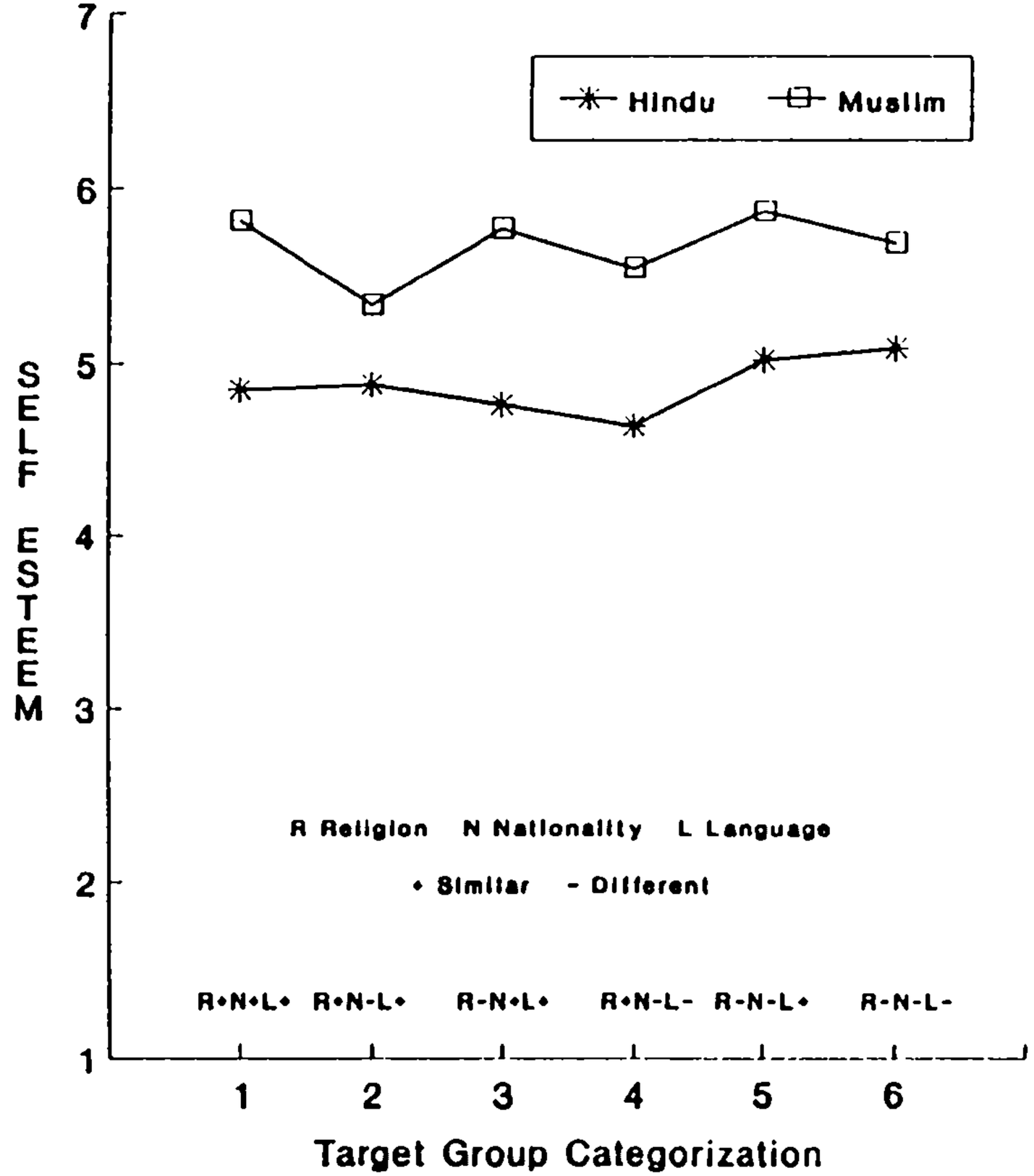


FIGURE 4.7 Collective self-esteem ratings by Hindu and Muslim subjects in different crossed-categorization conditions (Study: 4.2)

collective self-esteem vary across conditions.

Thus the study 4.2 again revealed that intergroup discrimination can be reduced by crossing social categorizations, especially the dominant categorization of religion and, to some extent, when more than one categorization dimension is crossed. Although a different measure of perceived group variability was used in this study, still no impact of crossed categorization on perceived outgroup homogeneity could be reported, although there was evidence of both ingroup homogeneity (for the Hindu minority) and outgroup homogeneity (for the Muslim majority) effects. Finally, personal and collective self-esteem data suggest that people may have a similar desire to achieve self-esteem in different crossed-conditions, but target-group evaluation data contradict Brown and Turner's (1979) thesis that, like dichotomous simple categorization situations, all crossed conditions are regarded as "intergroup" situations.

## 4.4 GENERAL DISCUSSION.

The results of both studies support the idea that crossed categorization constitutes a potential strategy for reducing intergroup conflict, yet one that is not fully understood. Both studies showed that intergroup discrimination can be reduced by crossing category memberships, but only in certain conditions. An analysis of these conditions helps us to decide between the main theoretical models and to discern how crossed categorization has its impact.

According to the category differentiation model (Doise, 1978), the crossing of two categorizations leads to convergence between, and divergence within, categories, thereby weakening inter- and intra-class effects. This model predicts no discrimination against groups which are outgroups on only one categorization dimension, a prediction that was clearly not supported in either study. Some target groups which shared one or more categorization dimension

were evaluated equivalently to the double- or triple-ingroup, but others were not. In fact, the only crossed conditions in which discrimination was significantly reduced were those in which religious categorization was shared.

Social identity theory (Tajfel & Turner, 1979) eschews this purely cognitive explanation and argues that the motivation for intergroup differentiation (aimed at achieving a positive self-esteem) persists in a situation of crossed categorization. This theory predicts discrimination against groups which are outgroups on one or more categorization dimensions. Again, this prediction was not upheld generally, because both personal and collective self-esteem were the same across conditions, but some target groups were discriminated against (notably those differing in terms of religious categorization) and others were not (those similar in terms of religion). However, as can be seen, cross-categorization situations neither always constitute an "intergroup" situation as Brown and Turner (1979) argued, following social identity theory, nor do they always break down the "intergroup" structure as the category differentiation model (Doise, 1978) suggests. The absence or presence of an "intergroup" categorization structure depends entirely on the crossed dichotomous category's psychological dominance as conceived by the people involved.

Both the category differentiation and social identity models agree in predicting additive discrimination against a double (or triple) outgroup. Although there is evidence for this prediction in several laboratory studies (see Vanbeselaere, 1991), it was found only in Study 4.1 and only for the Muslims. Further, where both category differentiation and social identity models predict no difference between "half-outgroups" (therefore researchers presented data collapsing the two half-outgroups, see Diehl, 1990; Vanbeselare, 1987, 1991),

real-life categorizations rarely have equal psychological importance and most likely one dimension dominates.

The relative strength of religious, compared with national and linguistic, categorizations supports a weak version of the category dominance model (Brewer et al., 1987). This model predicts that a single category will dominate, and that categorization based on the subordinate categorization distinction(s) will be ignored. Here, strong evidence has been reported that religion dominates both national and linguistic categorizations, but not that these latter dimensions were ignored (except for Hindus, in Study 4.2). From findings reported here it can be maintained that the category dominance model is likely to be relevant whenever research relies on real social categorizations that have historical, cultural, socio-economic and affective significance. It does not replace either of the other models which have been highlighted in the introduction, because it fails to address psychological processes, but it does appear to reflect reality in multi-group societies where one particular categorization may assume dominance over others (e.g., race in South Africa, religion in Northern Ireland, or language in Belgium).

Finally, although three different measures of perceived group variability were used across the two studies, no support was found for the hypothesis that crossed categorization breaks down the perceived homogeneity of the outgroup (Tajfel, 1982). On only one measure (range), and only for the Muslim majority (in Study 4.2), was there evidence that the ingroup was perceived as more variable than the outgroups. A more influential determinant of perceived variability was the majority or minority status of respondent and target groups. In particular, the Hindu minority in Bangladesh perceived their ingroup to be less variable (more homogeneous) than all other groups (Study 4.1), and they perceived the ingroup to be less variable than did the Muslim majority (both

studies). These results are consistent with previous studies that reported an "ingroup homogeneity effect" for members of minorities (see Simon, in press, for a review). However, some studies suggest that minority groups who reported an "ingroup homogeneity effect" also reported greater identification with their group membership than the majority group (e.g., Simon & Brown, 1987; Simon & Pettigrew, 1990). The collective self-esteem scale reliably assessed the importance of both minority (Hindu) and majority (Muslim) groups' religious group membership. Minority group themselves reported lower collective self-esteem than did the majority group. According to social identity theory it is more likely that members of the low-status, insecure minority group, who already have a less positive social identity (or their identity is somehow threatened), may display an "ingroup homogeneity effect" in order to perceive the group as more cohesive and sustain its solidarity in the face of a large majority. However, this proposition needs further investigation.

To conclude, both studies in this chapter report evidence of reduced intergroup discrimination in conditions where one or more categorization dimensions was crossed. The pattern of results provided partial support for each of the three main theories considered, but especially for an integration of social identity theory and the category dominance model. Regarding the psychological processes underlying the criss-cross effect, there is no evidence that crossed categorization works by attenuating perceived outgroup homogeneity.

Notes.

1. Brown and Turner (1979) pointed out one major shortcoming of Commins and Lockwood's (1978) study: it used a weak experimental manipulation. The mixed membership was not made explicit and subjects may have assumed some correlations between the two (*ad hoc* and religious) categorizations.

2. Vanbeselare (1987) also reported partial support for the double-outgroup response on the basis of responses from selected subjects (only those who had differentiated between groups).

3. In a comparative analysis of SD and Pd, contrary to Park and Judd (1990), Linville et al. (1986) concluded that the Pd appears to be the "purer measure of stereotypic thinking and perceived degree of heterogeneity" (p. 189).

# CHAPTER 5

## INTERGROUP ATTRIBUTIONS AND AFFECTIVE CONSEQUENCES IN MAJORITY AND MINORITY GROUPS.

Three studies explored intergroup attributional bias, with a focus on three limitations of previous research: the measurement of intergroup attributions, their affective consequences, and factors modifying the bias. In Study 5.1, Muslim (majority) and Hindu (minority) group members in Bangladesh rated their explanations of ingroup and outgroup members' positive and negative acts, on four causal dimensions: locus, stability, controllability by others, and globality. As predicted, ethnocentric attributions were internal, stable, uncontrollable or global for ingroup-positive and outgroup-negative behaviors, and external, unstable, controllable and specific for ingroup-negative and outgroup-positive acts. Both groups showed ingroup-favoring attributions, but only Muslims were outgroup-derogating. Causal dimensions were significant predictors of affects (happiness and pride, for positive outcomes, disappointment and anger, for negative outcomes), primarily in ingroup-outcome conditions, and the link between locus and pride was especially strong. In Study 5.2, Muslims attributed positive and negative acts by targets who shared (or did not) category membership on two dimensions (religion and nationality). There was again strong bias, especially in favor of double-ingroup and against double-outgroup targets. The religious category dimension dominated nationality, but bias was attenuated in some criss-cross conditions. Again causal dimensions (especially locus) predicted

affects, primarily in ingroup-outcome conditions, and also mediated self-esteem in certain conditions. In Study 5.3, Hindus attributed positive and negative acts by ingroup and outgroup members, under two order conditions (intergroup evaluations preceded or succeeded attributions). As predicted, bias by minority group members was accentuated when social categorizations were made salient. These studies increase our understanding of the determinants and consequences of this bias among majority and minority groups in a realistic setting.

## 5.1 GENERAL INTRODUCTION.

Intergroup attribution refers to the ways members of different social groups explain the behaviour (as well as the outcomes and consequences of behaviour) of members of their own and other social groups. A person attributes the behaviour of another person not simply to individual characteristics, but to characteristics associated with the group to which the other person belongs. In addition, the perceiver or attributor is also conceived of as a group member, which constitutes a further influence on the intergroup attribution process.

It is well established that attribution, as a fundamental cognitive process, helps to organize our perception about ingroup and outgroup members and thereby shapes our behaviour in the context of intergroup relations. From its inception, the prime concern of attribution theory was explaining interpersonal behaviour, rather than examining attributions at the intergroup level. It has been suggested by Heider (1958) that causes can be classified into two basic types, dispositional or situational, in the process of explaning an event at the interpersonal level. Zuckerman (1979), analyzing several dozen studies that looked at people's explanations of their own performance, found a systematic

tendency for people to claim that success on a task is due, for example, to their ability or qualities that are associated with themselves. In contrast, when people fail, they are much more likely to seek situational causes, looking outside themselves for an explanation.

This tendency to accept greater personal responsibility for a positive outcome than for a negative outcome has been termed the "self-serving attribution bias". It is quite clear that this individualistic attributional tendency inspired researchers, particularly those who were interested in the area of intergroup relations, to examine how members of different social groups explain the behaviour of members of their own and other social groups. All the early theories of attribution were only concerned with the first extreme of Tajfel (1978a) proposed interpersonal-intergroup continuum. However, this tendency to neglect both the social determinants and the social functions of the attribution process has been pointed out by a number of social psychologists (e.g., Apfelbaum & Herzlich, 1970 - 1971; Deschamps, 1977; Duncan, 1976; Hamilton, 1978; Hewstone & Jaspars, 1982, 1984; Mann & Taylor, 1974; Stephan, 1977). And belatedly, recent publications on causal attribution have started to devote proper attention to social aspects of attribution in intergroup relations (e.g., Hewstone, 1989).

Intergroup attributions are often ethnocentric, in the sense that members of a particular group favour members of their own group, rather than members of outgroups. This bias was first demonstrated by Taylor and Jaggi (1974) and has since been replicated in a variety of social and cultural contexts, using different experimental designs and methodologies (see Hewstone, 1990, for an exhaustive review). A brief review of some of these studies particularly related to inter-racial or inter-ethnic relations is presented below.

In the early seventies when attribution theory was mainly concerned with interpersonal phenomena, Taylor and Jaggi (1974) became aware of its application to intergroup relations by utilizing Kelley's (1973) idea of 'egocentric' attribution. This recognized a tendency for perceivers to attribute to themselves events with a positive outcome and to attribute to another person events with a negative outcome. Taylor and Jaggi (1974) carried out their investigation in southern India against the background of Hindu-Muslim conflict where Hindus were the high status majority and Muslims the low status minority. They hypothesized that respondents (Hindu office workers) would make internal attributions for other Hindus (ingroup members) performing socially desirable acts, and external attributions for undesirable acts; the reverse was predicted for attributions to outgroup members (Muslims). Results of this study clearly supported their hypothesis, although their study did not offer any reciprocal data by which causal attribution patterns employed by Muslims towards Hindus could be understood.

An impressive example of ethnocentric bias in attribution was provided by Duncan (1976). White subjects were presented with a rather ambiguous aggressive action performed by a black or white individual. Subjects regarded the individual as more aggressive when the person was a black than a white. In the second stage of his experiment, Duncan asked his subjects to explain the observed behaviour. The results showed a clear effect for race of protagonist. When the protagonist was black, subjects said that the violent behaviour was due to his personal characteristics; on the other hand, when the protagonist was white subjects explained the behaviour in terms of situational factors. However, as was the case in the Taylor and Jaggi's (1974) study, only white subjects were used in this study. A further problem with Duncan's (1976) study lies in the presentation

of stimulus information to subjects. As Hamilton (1979) noted, the two versions of the incident may not have been identical.

Most likely these reported ethnocentric attributional tendencies encouraged Pettigrew (1979) to coin the term "ultimate attribution error" concept, following the idea of a "fundamental attribution error" by Ross (1977). Pettigrew defined this error (in fact, a bias; see Hewstone, 1990) as a systematic pattern of intergroup attribution where behaviours that are negatively evaluated are more likely to be attributed to dispositional causes (i.e., personality traits or values) when they are enacted by outgroup members than are similar behaviours by ingroup members. Conversely, positive ingroup behaviour tends to be attributed to internal factors, whereas similar outgroup behaviour tends to be attributed to external factors. Thus, Pettigrew suggests that our explanation for ingroup and outgroup behaviour may be similarly biased. The four cells and their predicted attributions can be represented as follows:

| | | **Actor** | |
|---|---|---|---|
| | | **Outgroup** | **Ingroup** |
| **Behaviour** | **Positive** | external | internal |
| | **Negative** | internal | external |

FIGURE 5.1. Locus of attributions as a function of type of behaviour and type of actor (adapted from Hewstone & Jaspars, 1982).

However, Taylor and Jaggi's (1974) study which supported Pettigrew's hypothesis was strictly scrutinized by Hewstone and Ward (1985), and they pointed out several methodological shortcomings. Because of the importance of the study they conceptually replicated it in two southeast Asian countries, Malaysia and Singapore. In their first study with Malaysian and Chinese subjects in Malaysia, Malays behaved as expected, by making similar intergroup

attributions to the Hindus in Taylor and Jaggi's study, but the Chinese subjects showed no such bias favouring the ingroup. In this study Malay subjects, like Hindus, were actually a high status majority group in their society. On the other hand, the Chinese were a socio-numeric minority dominated by Malays. Hewstone and Ward (1985) suggested that these status differences might play an important role in determining the nature of the two groups' intergroup attitudes. In this study Chinese subjects' tendency not to favour the ingroup was quite consistent with previous findings that members of some minorities devalued their own group (e.g., Lambert, Hodgson, Gardner & Fillenbaum, 1960).

In their second study in Singapore (Hewstone & Ward, 1985), where relationships between the two groups were reversed, Hewstone and Ward found the Malays retained the tendency to make internal attributions for positive behaviour by ingroup members, although they did not make significantly different attributions for positive and negative behaviour of the Chinese. The Chinese did not significantly favour either group. These findings have been interpreted in terms of the multi-cultural environment in Singapore, which discourages stereotypic attitudes and discriminating intergroup behaviour.

Hewstone and Ward's study reminds us of one very important fact, that ethnocentric attribution is not a straightforward universal tendency. Socio-political issues, such as minority-majority relations and assimilationist versus culturally plural macro-strategies, are also likely to affect attributional patterns employed by a specific group (Hewstone & Jaspars, 1984). Thus, because of complex societal structures, in explaining intergroup attribution one must take into account relevant factors like group status, cultural context and particular structural characteristics of a society. Therefore Pettigrew's (1979) predictions can be only partly replicated in real life intergroup situations.

A differing attribution pattern has been found by different groups in some other studies. For example, Rosenberg and Wolfsfeld (1977) analysed attributions made for five Israeli and Arab behaviours by two groups of Arab and Israeli students studying in the United States during the Middle east conflict. The stimulus materials (actions) were all taken from major events reported in newspapers and were classified as successes, failures, moral acts, immoral acts and neutral acts. Attributions were open-ended and coded as situational or dispositional. The Israeli group gave more dispositional attributions for Israeli success and moral acts, and fewer dispositional attributions for Israeli immoral acts, than did Arab students. In contrast, they gave fewer dispositional attributions for Arab success, and more dispositional attributions for Arab immoral acts, than did Arab students.

In a study by Stephan (1977), fifth and sixth grade students from three ethnic groups - Blacks, Chicanos and Anglos - chose between internal and external attributions for positive and negative behaviours by another student from each group. Stephan predicted that ingroup members would make more dispositional attributions with respect to positive behaviour and fewer with respect to negative behaviours as compared to outgroup members. The hypothesis was confirmed for the Chicanos and marginally so for the Anglos. The results of the Black students did not confirm Stephan's hypothesis. However, Hewstone (1990) criticized Stephan's analysis of the data separately for the stimulus person, as a function of ethnicity. A full analysis of such data including main effects for the perceivers' group, the target group and the type of outcome, as well as all interactions, would have given a different picture.

On the basis of published research, Hewstone (1990) concludes that ingroup-serving attributions have been found in studies investigating positive and negative outcomes. Thus, some support can be obtained for Pettigrew's (1979)

conception of the "ultimate attribution error" in intergroup judgements of causality. Overall, it appears that perceivers display a preference for internal attributions when explaining positive, rather than negative ingroup behaviour (Stephan, 1977). The converse, however, receives little support in the literature. That is, when explaining outgroup behaviour, perceivers do not favour internal attributions for negative rather than positive behaviour.

Despite this body of support for ethnocentric attributional bias, Hewstone's (1990) review highlighted three major methodological and theoretical limitations to attribution research at intergroup level, which are addressed in this Chapter. These limitations concern: (1) the measurement of intergroup causal attributions; (2) the affective consequences of these attributions; and (3) the factors that accentuate or attenuate this bias.

The most obvious limitation of several of the studies on intergroup attributions for positive and negative outcomes is their reliance on the limited distinction between internal and external attributions. Three of the studies provided subjects with a forced choice between these two types of attributions (Hewstone & Ward, 1985; Stephan, 1977; Taylor & Jaggi, 1974), and one study coded open-ended attributions into only these categories (Rosenberg & Wolfsfeld, 1977). Cogent objections to the internal-external distinction have been voiced (e.g., Miller, Smith & Uleman, 1981), and research should now go beyond it.

The most marked improvement is to use Weiner's (1986) multidimensional approach to the structure of perceived causality. This specifies the underlying properties of causes in terms of three psychologically meaningful dimensions whose utility has been demonstrated in many studies. The three dimensions are:

(a) locus of causality : which reflects whether the cause is something about the actor (internal) vs something external to that person (i.e., situational);

(b) stability : which differentiates causes on the basis of their relative endurance, whether the cause is constant or variable over time; and

(c) controllability : which refers to whether a cause is under the control of the person (actor) or other people, or is uncontrollable by the actor or other people.[1]

A fourth dimension has also been suggested by research on the reformulated learned helplessness model of depression (Abramson, Seligman & Teasdale, 1978): whether a cause is specific to a given situation, or is more global in nature. Fincham and colleagues have found this dimension especially important in their work on attributions in marital relationships (e.g., Bradbury & Fincham, 1990); it remains to be seen whether the dimension is also relevant in intergroup relations where members of different groups interact over time and situations.

Extending Weiner's (1979, 1983, 1986) multi-dimensional approach to the structure of perceived causality, a number of studies (e.g., Deaux & Emswiller, 1974; Greenberg & Rosenfield, 1979; Hewstone, Jaspars & Lalljee, 1982; Hewstone, Wagner & Machleit, 1990; Whitehead, Smith & Eichhorn, 1982, Yarkin, Town & Wallston, 1982) have provided evidence for group-serving attributional biases in achievement contexts.

For example, one study most relevant to how category membership of an actor influences attributions in achievement contexts was carried out by Greenberg and Rosenfield (1979). The authors were interested in whether intergroup attributions were based simply on ethnocentrism or whether they were always founded on cultural stereotypes. They used a task for which these appeared to be no race-based cultural assumptions (extra-sensory perception).

White subjects of varying degrees of ethnocentrism were used. Subjects had to watch four videotapes portraying success and failure for black and white actors, and then attribute each performance to Weiner's four causes (ability, effort, luck & task difficulty). Subjects high in ethnocentrism attributed success by blacks less to ability and more to luck in comparison to success by whites. The reverse pattern was found for low-ethnocentrism subjects. Black failure was explained by high-ethnocentric subjects more in terms of lack of ability than failure by a white actor. Again, the pattern shown by low-ethnocentrism subjects was just the opposite. Lack of ability was referred to more as an explanation of black failure by high- than as low-ethnocentrism subjects. These results were interpreted as evidence of intergroup attribution biases based on ethnocentrism alone. However, Hewstone (1989) has pointed out one possibility that the highly ethnocentric subjects may have endorsed the stereotype that blacks are inferior in ESP ability, but low ethnocentric subjects did not. On the basis of 10 published studies investigating intergroup achievement attributions, Hewstone (1990) has concluded:

> "Based on a a variety of subjects and with between- as well as within-subjects designs, there is consistent evidence for intergroup attributions in achievement context" (p. 322)

As can be seen from the attribution literature, the classification of experimenter-supplied attributions has been roundly criticised for assuming a priori how causes are perceived by respondents (e.g., Hewstone, 1990; Ross & Fletcher, 1985; Weiner, 1979). Further, this can easily evoke demand characteristics. In fact, it is relatively easy to assess all four dimensions, by having respondents first write down what they consider to be the major cause of a behaviour, and then rate their own answer on the four dimensions. We then learn how perceivers interpret their own causal attributions, rather than having to

translate their causal attributions into the researcher's causal dimensions (Russell, 1982). The reliability and validity of this method has been confirmed (e.g., Russell, McAuley & Tarico, 1987), and increasingly used in attribution research (see Fletcher & Fincham, 1991). Using this more detailed approach, ethnocentric attributions could be internal, stable, uncontrollable by others and/or global for ingroup-positive and outgroup-negative behaviours; or external, unstable, controllable by others and/or specific for ingroup-negative and outgroup-positive behaviours.

It was hoped that the improved measurement of intergroup attributions, using detailed assessment of causal dimensions, would enable us to tackle the second limitation of previous research: the neglect of the affective consequences of intergroup attributions. Given the impressive body of research on the affective consequences of interpersonal attributions, there are good grounds for expecting links between intergroup attributions and affective consequences. The nature of this link is, however, quite complex. A first issue concerns a distinction, made in research on achievement attributions, between two different types of affect (Weiner, Russell & Lerman, 1978, 1979). "Outcome-dependent" affects refer to very general emotions that are experienced intensely following success and failure outcomes, irrespective of the causal attribution made for the outcome (e.g., "happy", following success, and "disappointed" following failure). "Attribution-dependent" affects, in contrast, are influenced by the specific causal attribution for the outcome (e.g., "pride" following attribution of success to an internal cause, and "anger" following the attribution of failure to a cause that is controllable by others).

For example, in Weiner et al.'s (1978) first study, subjects were asked to imagine that a student succeeded or failed in an exam for a particular reason, such as hard work, or bad luck. The subjects then rated the intensity of the

affective reactions that they would have experienced in that situation. In the second study (1979), respondents were asked to recall a time in life when they succeeded or failed for a specific reason. In addition, they also recalled the affects experienced at that time. These two studies found outcome-dependent emotions, such as happiness, sadness, disappointment, pleasure and satisfaction, as well as, emotions that were dependent on specific attributions (e.g., ability (internal-locus of causality) - pride/competence, other's action (external) - gratitude/anger, etc).

A second issue concerns whether there is a link between causal attributions, or causal dimensions, and affects (e.g., Weiner et al., 1978, 1979). Russell and McAuley (1986) found evidence of both links, with ratings on the locus dimension especially important. Since causal dimensions represent general structures of underlying specific attributions, it seems more likely that affects will have a more consistent linkage with causal dimensions than with specific attributions. As the reported research always assessed causal attributions using an open-ended measure (followed by ratings of the cause on dimensions), only the relationship between causal dimensions and affect (including affects thought to be outcome-dependent and attribution-dependent) is reported below. This is the first empirical investigation of what, if any, affective consequences follow from ingroup-favouring or outgroup-derogating attributions.

Tajfel (1969) stated that a person's system of causes can help provide a positive self-image. Thus, at the intergroup level, group members provide causal explanations in a way that enables them to enhance their social identity (i.e., enhancement through ingroup favouritism or outgroup derogation). For example, if ingroup-positive outcomes attributed internally did result in greater pride, then this could be seen as indirect evidence of group members using their attributions to achieve or enhance a positive social identity (or self-definition in terms of

group membership; Tajfel & Turner, 1979). Although social identity theory provides a plausible account of intergroup-attribution results (e.g., Hewstone, 1990), one crucial piece of empirical evidence is lacking: the relationship between ingroup-serving (or outgroup-derogating) attributions and self-esteem (Hewstone, 1989). As Messick and Mackie (1989) have pointed out, researchers have frequently failed to provide a convincing test of the link between some form of intergroup discrimination and self-esteem and, where they have done, there is little evidence of a straightforward relationship (see Abrams & Hogg, 1988; review of social identity theory in Chapter 2 above). Study 5.2 reported in this chapter provides the first empirical evidence of a relationship between intergroup attributions and self-esteem.

The final issue considered in this research concerns the factors that accentuate or attenuate intergroup attributional bias (see Wilder, 1986a). Thus far analysis of this question has been impressionistic and post hoc. For example, we know that the usual bias can be extinguished, even reversed, for members of some minority, subordinate or low-status groups (e.g., Deaux & Emswiller, 1974; Hewstone & Ward, 1985, Experiment 1). A more controlled approach involves manipulating simultaneously the similarity or difference between a target actor and the experimental subject on more than one social categorization. Previous work on intergroup relations has found that "criss-cross" categorization can decrease intergroup discrimination, when subjects assigned to different groups on one dimension find that they share group membership on a second dimension (e.g., Brewer, Ho, Lee & Miller, 1987; see Chapter 4 for details). In contrast, converging boundaries (e.g., targets are simultaneously members of more than one outgroup) can increase discrimination (e.g., Brewer & Miller, 1984). Study 5.2 reported below also tested the prediction that intergroup attributional bias by a majority group would be strongest in favour of a double ingroup and against a

double outgroup, but could be weakened by crossing categorization on both dimensions.

From previous research, it is also more likely that bias can be accentuated by heightening the salience of group stereotypes and intergroup comparisons. For example, Capozza and Nanni (1986), Doise (1969) and Skinner and Stephenson (1981) found that emphasizing the existence of an outgroup exaggerated intergroup discriminations. This may have been done in Taylor and Jaggi's (1974) study, by having subjects rate ingroup and outgroup on evaluative traits before they made attributions. Study 5.3 reported in this chapter manipulated the order of attributional and adjective ratings as an independent variable to test this hypothesis for a minority group that had shown quite weak bias.

To summarize, three studies investigated intergroup attributions by members of majority (Muslim) and minority (Hindu) groups. Study 5.1 reported in this chapter was a conceptual replication of Hewstone & Ward (1985), using a more sophisticated assessment of causal dimensions, and relating these to affects, for majority and minority groups. Study 5.2 focused on the majority group and compared attributions (and their relationship with affect) in conditions of crossed categorization. Study 5.3 focused only on the minority group and compared attributions under different conditions of group salience.

## 5.2 STUDY 5.1.

### 5.2.1 METHOD.

#### 5.2.1.1 Subjects.

Fifty-eight Hindu (20 female, 38 male) and 59 Muslim (21 female, 38 male) students from the University of Rajshahi, Bangladesh served as subjects. The mean age was for Hindus 21.6 (SD = 1.44) and for Muslims 21.0 (SD = 1.43) years.

5.2.1.2 Design.

A 2 (religious group of subjects: Hindu/Muslim) x 2 (religious group of actor: Hindu/Muslim) x 2 (outcome: positive/negative) mixed design was employed, with the last two factors manipulated within subjects.

5.2.1.3 Stimulus materials.

Each subject completed a back translated questionnaire booklet, in Bengali, that was based closely on the materials used by Hewstone and Ward (1985). Subjects were presented with a series of one-paragraph descriptions of the behaviour of an actor in a particular situation. For each story, subjects were asked to imagine that the actor was directing his behaviour towards them. Specifically, each of three stories described a situation involving either a Hindu or a Muslim actor behaving towards the subject in a positive (socially desirable) or negative (socially undesirable) manner. The situations were:

(a) a passer-by who either helped or ignored the subject after he had fallen off his bicycle;

(b) a shopkeeper who was either generous to or cheated the subject; and

(c) a householder who either sheltered or refused shelter to the subject when the subject was caught in the rain.

Pilot work on the same population verified that these stories did not fit with respondents' stereotypes of either religious group.

All possible combinations of the three stories, the actors of two religious groups, and positive/negative outcomes resulted in a total of 12 different paragraphs. These were presented in random order. For each story, in turn, subjects were asked to write down the one most important perceived cause of the behaviour. Two sets of dependent measures were then presented. The first set

consisted of four causal dimensions. After writing down the cause, subjects were asked to rate the cause in terms of internal-external, stable-unstable, controllable-uncontrollable and global-specific causal dimensions. Causal locus was assessed by the extent to which the cause reflected something about the actor vs something external to that person. Causal stability entailed a judgement of whether the cause was constant or variable over time. Controllability reflected whether the cause was under the control of other people, or not. Globality assessed whether the cause was something that affected only the actor's behaviour in question, or would affect his behaviour in other situations as well. All ratings were made on 7-point rating scales (not at all, 1; very, 7), higher scores indicating internal locus, stability, controllability by others, and globality.

The second set of measures consisted of 4 affective rating scales. Immediately after each story and their attributions for it, subjects rated how much they experienced each of these four affects. These affects were chosen to include positive and negative instances of ostensibly outcome-dependent (happiness, disappointment) and attribution-dependent (pride, anger) affects. The four affects used had also been found in previous research to load on different factors: happy ("positive affect"), disappointment ("negative affect"), proud ("competence") and angry ("anger") (see Russell & McAuley, 1986). Ratings were made on 7-point scales (not at all, 1; very much, 7).

5.2.1.4 Procedure.

Subjects were randomly chosen from the four large halls of residence. Questionnaires were distributed on an individual basis at the university, by an experimenter of the same religious group as the subject, and were completed privately. They were informed that there were no right or wrong answers, and assured that their answers would remain anonymous. Originally 65 questionnaires were distributed to each group. Seven Hindu students (10%) and

six Muslim students (9%) either failed to return their questionnaires or returned them totally unanswered, therefore these cases are excluded from the analysis. Most of these subjects gave an excuse that as the questionnaires were lengthy, they could not spare the time to answer.

### 5.2.2 RESULTS AND DISCUSSION.

#### 5.2.2.1 Overview.

The data were analysed separately for open-ended causal attributions, causal dimensions and causal dimension-affect relations. As there were no initial effects of sex of subject, this factor was dropped from the analysis. The data were also collapsed over stories, which was not a theoretically interesting factor.

#### 5.2.2.2 Causal attributions.

Prior to examining causal dimensions and relations between causal dimension and affective reaction in different experimental conditions specified by the actor and the outcome of the act, all free-response attributions were coded into the following five categories: whether in relation to the actors' religious group categorization and the outcome of the act the written open-ended attribution expressed either a (a) positive; (b) negative; (c) neutral; (d) ambiguous (and/or both positive and negative) causal explanation of the event, or (e) does not fit any of the previous four categories. As theoretically 1404 (12 stories x 117 respondents) open-ended attributions had to be coded, four groups of judges (two in each group; one Hindu and one Muslim) were employed from the same culture. Hindu and Muslim subjects' attributions for ingroup actors' positive outcome were coded by one group (agreement between two coders was 94.7%) and the second group coded the negative outcome (agreement 92.8%). The third group coded both Hindu and Muslim subjects' attributions for outgroup actors' positive outcome (agreement 92.5%) and the fourth group coded negative

outcome (agreement 96.3%). Disagreements (on average 5.5%) were resolved by discussion with a third coder. The number of different attributions employed in different conditions are reported in table 5.1.

Table 5.1. Classifications of Open-ended Attributions as a Function of Religious Group of Actor, Outcome, and Religious Group of Subject (Study 5.1).

| | **Religious Group of Actor** | | | |
|---|---|---|---|---|
| | Ingroup | | Outgroup | |
| Religious group of Subjects/ Types of Attribution: | **Outcome** | | | |
| | Positive | Negative | Positive | Negative |
| **Muslim** | | | | |
| Positive | 139 | 84 | 97 | 10 |
| Negative | 6 | 92 | 35 | 166 |
| Neutral | 29 | 0 | 42 | 0 |
| Unclassified | 1 | 0 | 3 | 1 |
| **Hindu** | | | | |
| Positive | 132 | 40 | 117 | 29 |
| Negative | 8 | 127 | 14 | 136 |
| Neutral | 29 | 2 | 38 | 4 |
| Unclassified | 3 | 3 | 3 | 2 |

Note: Attributions are counted across 3 stories.

A number of cross-tabulation Chi-square tests were conducted to examine whether the employed attribution pattern differed as a function of religious categorization of the actor. Firstly, four *within* group comparisons were conducted employing a 2 (ingroup/outgroup actor) x 3 (positive/negative/

neutral attribution) Chi-square analysis. Some free-responses which were coded as "unclassified" (including ambiguous) were excluded from these analyses as they were made-up less than 2 per cent of the total coded responses. $X^2$- tests revealed a non-significant difference in the employed attribution pattern by Hindu ($X^2$ (2) = 3.75, *n.s*) respondents for *positive outcome* (positive: 132 vs 117, negative: 8 vs 14, neutral: 29 vs 38, for in- and outgroup, respectively). However, Muslim respondents significantly employed more positive (139 vs 97) and fewer negative (6 vs 35) attributions for the ingroup than the outgroup actor ($X^2$ (2) = 30.37, $p$ <.0001).

For *negative outcome*, attributions employed by Hindus failed to show any effect of categorization ($X^2$ (2) = 2.73, *n.s*; positive: 40 vs 29, negative: 127 vs 136, for in- and outgroup respectively). However, the interaction between actor and attribution was highly significant for Muslim respondents, $X^2$ (1) = 79.48, $p$ <.0001. This finding simply means that Muslim subjects employed more positive (84 vs 10) and fewer negative (92 vs 166) attributions for the ingroup than the outgroup actor.

Four additional Chi-square tests were conducted to examine whether the employed attribution pattern differed *between* Hindu and Muslim respondents' in the same experimental condition. For the *positive outcome*, the between group comparison for the ingroup actor failed to show any differential effect, $X^2$ (2) = < 1, *n.s.* (positive: 132 vs 139; negative: 8 vs 6; neutral: 29 vs 29, Hindu and Muslim, respectively). For the outgroup actor this effect was significant, $X^2$ (2) = 11.00, $p$ <.005. This finding shows that, comparatively Hindus employed more positive (117 vs 97) and fewer negative (14 vs 35) explanations than Muslims.

For *negative outcome*, the between group difference was robust. A significant effect for ingroup actor ($X^2$ (2) = 23.07, $p$ <.0001) reflects that Hindus employed fewer positive (40 vs 84) and more negative (127 vs 92)

attributions than Muslims. There was also a significant between-group effect for outgroup actor, $X^2$ (2) = 8.76, $p$ <.015, resulting from the fact that the Hindus expressed more positive (29 vs 10) and fewer negative (136 vs 166) explanations than Muslims.

To summarize the results for causal attributions, only Muslim group showed categorization effects for both outcome (positive and negative) conditions. Except for ingroup actors' positive outcome condition, all other three between-group effects were significant, resulting from the fact that Muslim attributions were clearly more ingroup-favouring and outgroup-derogating than those of Hindus.

5.2.2.3 Causal dimensions.

Ratings on each of the four causal dimensions were analysed using a 2 (subject's religious group) x 2 (actor's religious group) x 2 (outcome) analysis of variance (ANOVA), with repeated measures on the last two factors. Then following Hewstone (1990), post hoc simple main effect tests (Winer, 1971) were computed to examine two effects in both groups: *categorization effects* (which compare attributions made for ingroup vs outgroup members, separately for positive and negative outcomes), and *outcome effects* (which compare attributions made for positive and negative outcomes, separately for ingroup and outgroup actors). Means for all causal dimensions are reported in table 5.2 (see also figure 5.2). The statistics summary tables for all the analyses are in Appendix F.

Table 5.2. Mean Ratings and Standard Deviations on Causal Dimensions as a Function of Religious Group of Actor, Outcome, and Religious Group of Subject (Study: 5.1)

| | **Religious Group of Actor** | | | |
|---|---|---|---|---|
| | Ingroup | | Outgroup | |
| Causal Dimensions/ Religious group of Subjects: | **Outcome** | | | |
| | Positive | Negative | Positive | Negative |
| **Locus of causality** | | | | |
| Muslim | 5.61 a/1 (.61) | 4.00 b/1 (1.04) | 4.23 b/1 (.93) | 6.07 c/1 (.78) |
| Hindu | 5.60 a/1 (1.10) | 5.35 a/2 (1.21) | 5.24 a/2 (.79) | 5.25 a/2 (1.15) |
| **Stability** | | | | |
| Muslim | 4.96 a/1 (.90) | 2.63 b/1 (1.03) | 3.35 c/1 (.92) | 5.29 a/1 (.85) |
| Hindu | 4.13 a/2 (1.50) | 3.32 b/2 (1.47) | 3.83 ab/2 (1.80) | 3.47 b/2 (1.63) |
| **Controllability** | | | | |
| Muslim | 3.96 a/1 (1.27) | 5.32 b/1 (1.04) | 5.11 b/1 (1.09) | 3.57 a/1 (1.15) |
| Hindu | 4.37 a/1 (1.65) | 4.91 b/1 (1.57) | 4.76 a/1 (1.44) | 4.47 a/2 (1.56) |
| **Globality** | | | | |
| Muslim | 5.72 a/1 (.61) | 3.42 b/1 (1.35) | 4.11 c/1 (1.40) | 5.88 a/1 (.95) |
| Hindu | 5.15 a/2 (1.03) | 4.24 b/2 (1.43) | 4.83 a/2 (1.28) | 4.27 b/2 (1.48) |

Note: High scores indicate that the cause was rated as Internal, Stable, Controllable by others and Global (on 7 point scale). a,b,c,d indicate a horizontal within-group, and 1,2 indicate a vertical between-group, comparison. Means within each row or column that do not share a common letter or number are significantly different (Fisher's LSD simple main effect test; $p < .05$).

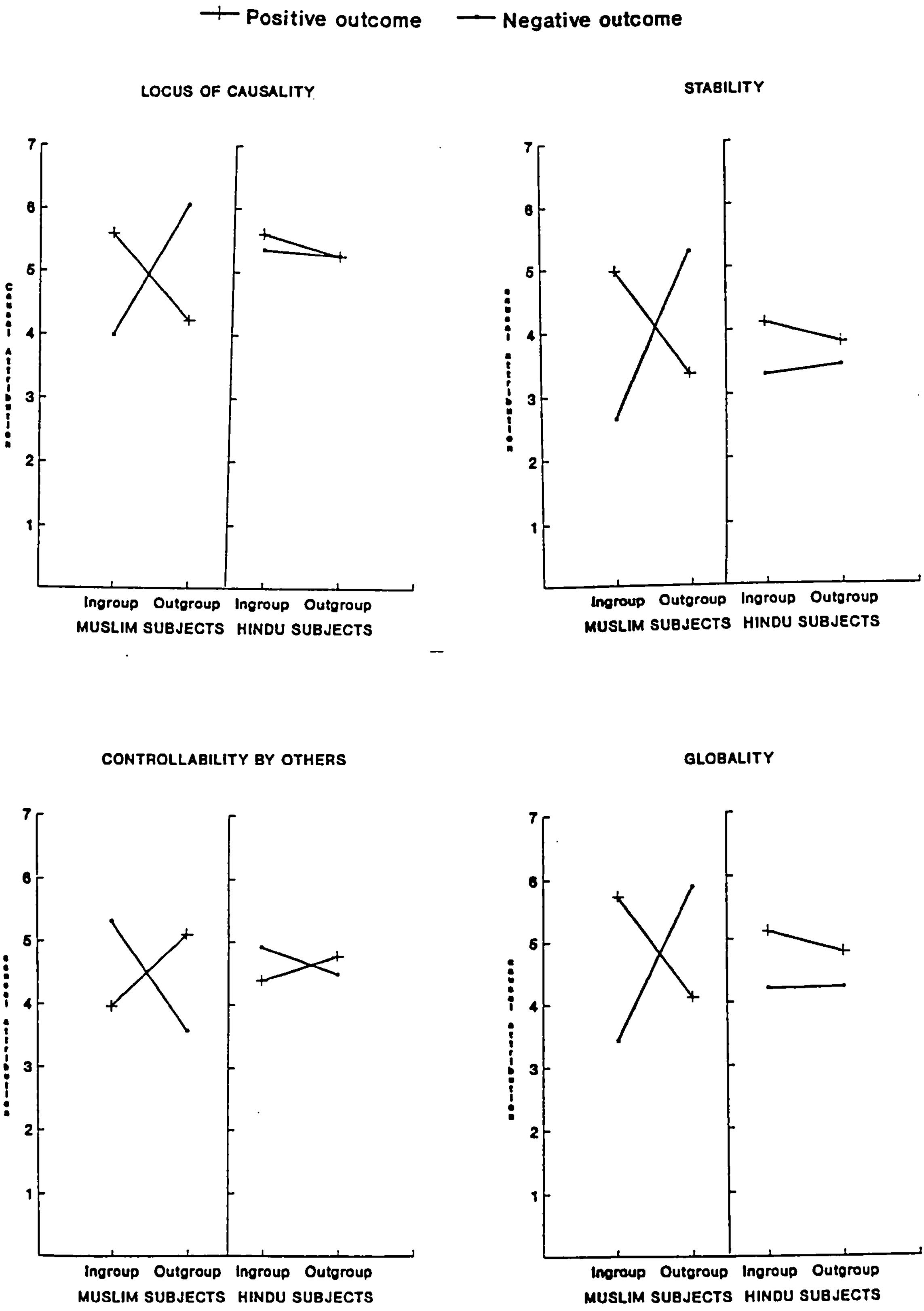


FIGURE 5.2 Mean Ratings on Causal Dimensions as a Function of Categorization of Target Actor and Outcome (Study 5.1)

Locus of causality. ANOVA yielded main effects for subjects' religious group ($F(1,114) = 14.69$, $p < .0001$) and actors' religious group ($F(1,114) = 13.33$, $p < .0001$). The two-way interaction for subjects' group x actors' group was also significant ($F(1,114) = 87.05$, $p < .0001$) and this was qualified by a significant three-way interaction for subjects' group x actors' group x outcome, $F(1, 114) = 117.69$, $p < .0001$.

A simple main effect test (Fisher's LSD, using the within-cell error term: MSE = .69, d.f. = 57) reflects, for the Muslim majority group, clear categorization and outcome effects. As predicted, Muslims gave more internal attributions for positive acts of Muslim ($M = 5.61$) vs Hindu ($M = 4.23$) actors, and less internal attributions for negative acts of Muslim ($M = 4.00$) vs Hindu ($M = 6.07$) actors (see Table 2.1). They differentiated positive and negative outcomes for both groups, but made more internal attributions for ingroup-positive ($M = 5.61$) than ingroup-negative ($M = 4.00$) behaviours, but for outgroup-negative ($M = 6.07$) than for outgroup-positive ($M = 4.23$) behaviours. There were no significant differences for the Hindu minority group (LSD, within-cell error term: MSE = 1.03, d.f. = 57), and Muslim attributions were clearly more ingroup- favouring and outgroup-derogating than those of Hindus.

A between subjects' group comparison (LSD, within-cell error term: MSE = .86, d.f. = 114) also confirmed this finding. Muslims gave less internal attributions than Hindus for ingroup-negative acts ($M$s = 4.00 vs 5.35) and for outgroup-positive acts ($M$s = 4.23 vs 5.24), but more internal attributions for outgroup-negative acts ($M$s = 6.07 vs 5.25).

Stability. ANOVA revealed significant main effects for all three factors, subjects' religious group, $F(1, 115) = 5.66$, $p < .02$; actors' religious group, $F(1,115) = 8.88$, $p < .01$, and outcome, $F(1,115) = 13.20$, $p < .001$. These main effects were qualified by the first order subjects' group x actors' group, $F(1,115)$

= 4.75, $p$ <.04 and actors' group x outcome, $F(1,115) = 74.76, p$ <.0001, interactions. The second order interaction for subject's group x actor's group x outcome, $F(1, 115) = 113.75$, $p$ <.0001 was highly significant.

A simple main effect test (LSD, within-cell error term: MSE = .96, d.f. = 58) confirms that Muslims' ratings again showed predicted categorization and outcome effects. They attributed the cause as more stable for positive acts of Muslim ($M$ = 4.96) vs Hindu ($M$ = 3.35) actors, and less stable for negative acts of Muslim ($M$ = 2.63) vs Hindu ($M$ = 5.29) actors (see Table 5.2; Graph 5.2). They differentiated positive and negative outcomes for both groups, but attributed more stability for ingroup-positive ($M$ = 4.96) than ingroup-negative ($M$ = 2.63) behaviours, but for outgroup-negative ($M$ = 5.29) than for outgroup-positive ($M$ = 3.35) behaviours. For the Hindu subjects (LSD, within-cell error term: MSE = 1.89, d.f. = 57) the only effect was an outcome effect for the ingroup, with more stable attributions for ingroup-positive ($M$ = 4.13) than ingroup-negative ($M$ = 3.32) behaviours.

Subjects' between group comparison (LSD, within-cell error term: MSE = 1.42, d.f. = 115) reflects that overall Muslim attributions were again more ingroup-favouring and outgroup-derogating than those of Hindus. Muslims ratings were less internal for ingroup-negative ($M$s = 2.63 vs 3.32) and outgroup-positive ($M$s = 3.35 vs 3.83) acts but more internal for ingroup-positive ($M$s = 4.96 vs 4.13) and outgroup-negative (($M$s = 5.29 vs 3.47) acts.

<u>Controllability.</u> Because this dimension refers to controllability by others, these ratings show the reverse pattern. ANOVA on this dimension generated no significant main effects. However, the two-way interaction for actors' religious group x outcome was significant, $F(1,115) = 19.20\, p$ <.001 and again the three-way interaction for subjects' group x actors' group x outcome was highly significant, $F(1,115) = 62.43, p$ <.0001.

A simple main effect test (Fisher's LSD, within-cell error term: MSE = 1.67, d.f. = 58) revealed that Muslims rated their attributions for ingroup-positive behaviour less controllable by others ($M$ = 3.96) than they did for outgroup-positive behaviour ($M$ = 5.11), and their attributions for ingroup-negative behaviour more controllable ($M$ = 5.32) than for outgroup-negative behaviour ($M$ = 3.57). They also differentiated positive and negative outcomes for both ingroup ($M$s = 3.96 vs 5.32) and outgroup ($M$s = 5.11 vs 3.57) utilizing the similar ingroup favouring and outgroup derogatory pattern (reversed) described for the previous two dimensions (see Table 5.2, Graph 5.2). The Hindus (LSD, within-cell error term: MSE = 1.59, d.f. = 57) again showed weaker bias; they gave significantly more controllable attributions for ingroup-negative ($M$ = 4.91) than outgroup-negative ($M$ = 4.47) behaviours. They also differentiated positive and negative outcomes only for the ingroup. As can be seen, they considered the cause was less controllable by others when the outcome was positive ($M$ = 4.37) than negative ($M$ = 4.91).

The only significant comparison between groups (LSD, within-cell error term: MSE = 1.63, d.f. = 115) was that Muslims ($M$ = 3.57) gave less controllable attributions for outgroup-negative behaviours than did Hindus ($M$ = 4.47).

Globality. Ratings on the globality dimension showed the same pattern as those for locus and stability. ANOVA yielded main effects for actors' religious group ($F(1,115) = 9.76$, $p < .01$) and outcome ($F(1,114) = 35.24$, $p < .0001$). These main effects were qualified by the first order interaction for subjects' group x actors' group ($F(1,115) = 7.69$, $p < .01$) and actors' group x outcome ($F(1,115) = 69.13, p < .001$). These interactions were qualified by the second-order interaction for subjects' group x actors' group x outcome, $F(1,115) = 97.94$, $p < .0001$.

A simple main effect test (Fisher's LSD, within-cell error term: MSE = 1.54, d.f. = 58) reflects that Muslims gave more global attributions for ingroup-positive ($M$ = 5.72) than outgroup-positive ($M$ = 4.11), and less global attributions for ingroup-negative ($M$ = 3.42) than outgroup-negative ($M$ = 5.88), behaviours (see Table 5.2, Graph 5.2). They also gave more global attributions for ingroup-positive ($M$ = 5.72) than ingroup-negative ($M$ = 3.42) outcomes, but the reverse for outgroup-positive ($M$ = 4.11) and outgroup-negative ($M$ = 5.88) outcomes. Hindus (LSD, within-cell error term: MSE = 1.38, d.f. = 57) only showed an outcome effect: they gave more global attributions for ingroup-positive ($M$ = 5.15) than ingroup-negative ($M$ = 4.24) outcomes, but did the same for outgroup outcomes ($M$s = positive: 4.83 vs negative: 4.27).

Between subjects' group comparisons (LSD, within-cell error term: MSE = 1.46, d.f. = 115) show that overall Muslims' globality attributions were again significantly more ingroup-favouring and outgroup-derogating than were Hindus. Muslims' ratings were more internal for ingroup-positive ($M$s = 5.72 vs 5.15) and outgroup-negative (($M$s = 5.88 vs 4.27) acts but less internal for ingroup-negative ($M$s = 3.42 vs 4.24) and outgroup-positive ($M$s = 4.11 vs 4.83) acts.

To summarize the results for causal dimensions, there was consistent evidence of rampant intergroup attributional bias by members of the Muslim majority group. On all four dimensions they showed evidence of ingroup-favouring and outgroup-derogating attributions.

5.2.2.4 Causal dimension - affect relations.

Ratings of all four affects in each condition were computed first, but preliminary analyses revealed that only outcome-consistent affects received high ratings. Across all conditions, the predominant affective responses to positive outcomes were happiness and pride ($M$s = 4.99 and 4.98), rather than disappointment and

anger (*M*s = 2.45 and 2.19). The principal affective responses to negative outcomes were disappointment and anger (*M*s = 5.18 and 5.43), rather than happiness and pride (*M*s = 2.55 and 2.41). The analysis therefore focused on the prediction of outcome-consistent affects and accordingly separate multiple regressions for each experimental outcome (according to actors' group/outcome: ingroup-positive, ingroup-negative, outgroup-positive, outgroup-negative) were computed. Regression analysis was computed using the forced entry method on SPSS$^{x}$, which allowed all four causal dimensions to be entered into the equation, one at a time. In each condition, the two relevant affects were regressed on the four causal dimensions. The results of these regressions are reported in Table 5.3 (positive outcome) and 5.4 (negative outcome).[2] The detail summary tables for all the regression analyses and intercorrelations between the predictor and criterion variables are in statistical Appendix F.

For the *positive affects*, the causal dimensions were found in combination to be significant predictors of affects only under certain conditions, and the percentage of variance in affect scores that was accounted for varied widely. It is clear from Table 3 that a substantial proportion of variance was explained only when the actor was an ingroup member. Feelings of happiness (42%) were maximized for Muslims when the cause of a positive outcome by an ingroup member was perceived as internal ($\beta$ = .370, $F$ = 9.84, $p$ <.003) and global ($\beta$ = .338, $F$ = 9.05, $p$ <.005). Similarly feelings of pride (38%) were maximized when the cause was perceived as internal ($\beta$ = .371, $F$ = 9.22, $p$ <.004) and global ($\beta$ = .316, $F$ = 7.39, $p$ <.01).

Table 5.3 Causal Dimension and Affect Relations for Positive Outcome as a Function of Religious Group of Respondent and Actor (Study 5.1).

| | **Religious Group of Respondent** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Muslim[a] | | | | Hindu[b] | | | |
| | **Religious Group of Actor** | | | | | | | |
| | Muslim | | Hindu | | Muslim | | Hindu | |
| Affect / Predictor | Beta | F | Beta | F | Beta | F | Beta | F |
| **Happiness** | | | | | | | | |
| Locus of causality | .370 | 9.84** | -.128 | < 1 | -.141 | 1.24 | .393 | 8.79** |
| Stability | .157 | 1.93 | .147 | 1.11 | -.295 | 4.88* | .149 | 1.17 |
| Controllability | .099 | < 1 | -.106 | < 1 | -.307 | 5.61* | -.019 | < 1 |
| Globality | .338 | 9.05** | -.275 | 2.86 | -.152 | 1.33 | .071 | < 1 |
| $R^2$ | .417 | | .134 | | .206 | | .224 | |
| **Pride** | | | | | | | | |
| Locus of causality | .371 | 9.22** | -.078 | < 1 | -.251 | 3.44 | .442 | 12.47** |
| Stability | .092 | < 1 | .128 | < 1 | -.063 | < 1 | .075 | < 1 |
| Controllability | -.038 | < 1 | -.039 | < 1 | -.237 | 2.99 | -.157 | 1.47 |
| Globality | .316 | 7.39** | -.104 | < 1 | -.162 | 1.34 | .084 | < 1 |
| $R^2$ | .375 | | .026 | | .112 | | .307 | |

Note. [a] df = 1, 54 [b] df = 1,53 * $p < .05$ ** $p < .01$.

Table 5.4. Causal Dimension and Affect Relations for Negative Outcome as a Function of Religious Group of Respondent and Actor (Study 5.1).

| | **Religious Group of Respondent** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Muslim[a] | | | | Hindu[b] | | | |
| | **Religious Group of Actor** | | | | | | | |
| | Muslim | | Hindu | | Muslim | | Hindu | |
| Affect / Predictor | Beta | F | Beta | F | Beta | F | Beta | F |
| **Disappointment** | | | | | | | | |
| Locus of causality | .299 | 5.48* | -.141 | 1.08 | -.089 | < 1 | .102 | < 1 |
| Stability | .121 | 1.04 | -.132 | < 1 | -.003 | < 1 | .024 | < 1 |
| Controllability | .008 | < 1 | -.202 | 2.09 | -.031 | < 1 | -.005 | < 1 |
| Globality | .332 | 7.79** | -.077 | < 1 | -.131 | < 1 | .299 | 4.64* |
| $R^2$ | .295 | | .067 | | .025 | | .094 | |
| **Anger** | | | | | | | | |
| Locus of causality | .693 | 39.62** | -.218 | 2.64 | -.016 | < 1 | .213 | 2.52 |
| Stability | .013 | < 1 | .060 | < 1 | -.248 | 2.88 | .142 | < 1 |
| Controllability | -.195 | 3.35 | -.152 | 1.23 | -.053 | < 1 | .000 | < 1 |
| Globality | .138 | 1.81 | .181 | 1.84 | -.088 | < 1 | .122 | < 1 |
| $R^2$ | .477 | | .089 | | .075 | | .091 | |

Note. [a] df = 1, 54 [b] df = 1,53 * $p < .05$ ** $p < .01$.

For Hindus, locus was the only significant predictor of both happiness (22%, $\beta$ = .393, $F$ = 8.79, $p$ <.005) and pride (31%, $\beta$ = .442, $F$ = 12.47, $p$ <.001) for the ingroup actor. In addition, happiness felt after a positive outcome by an outgroup member was mediated by perceptions of the cause as unstable ($\beta$ = -.295, $F$ = 4.88, $p$ <.04) and uncontrollable by others ($\beta$ = -.307, $F$ = 5.61, $p$ <.03) but only for the Hindus (21%).

For the *negative affects*, the prediction was generally weaker, except in the ingroup condition for Muslims (see table 5.4). Feelings of disappointment were maximized (30%) when the cause of a negative outcome was perceived as internal ($\beta$ = .299, $F$ = 5.48, $p$ <.025) and global ($\beta$ = .332, $F$ = 7.79, $p$ <.01). Feelings of anger were mediated by perceptions of the cause as internal (48%, $\beta$ = .693, $F$ = 39.62, $p$ <.001). The only significant prediction occurred in the ingroup-negative condition for Hindus for disappointment; the more the cause of a negative event was perceived as global ($\beta$ = .299, $F$ = 4.64, $p$ <.04), the more disappointment was felt (9%). The fact that negative affects for ingroup-negative acts are mediated by attributions indicates that ingroup members' negative behaviours can have an impact on group identity. These feelings of disappointment and anger can, however, be avoided by attributing ingroup-negative behaviour to external, specific causes.

To summarize, causal dimensions were predictive of negative and, especially, positive affects, but primarily for outcomes associated with ingroup, not outgroup, actors. As in previous intra- and interpersonal work, the locus of causality dimension was found overall to be the most influential causal dimension (e.g., Russell & McAuley, 1986; Weiner et al., 1978, 1979). The strong link between locus and pride, found for both groups, provides the first, indirect, empirical support that group-serving attributions may be linked to self-esteem. In addition, globality attributions, which have no place in Weiner's theory, were

found to be major predictors of both positive and negative affects. Particularly in achievement contexts controllability is regarded as one of the vital causal dimensions, however, this study suggests that it may be less important in intergroup attribution. It is possible this dimension may work differently in intergroup conflict and conflict resolution (see Hewstone, 1988; Tetlock & McGuire, 1986). Weiner (1986) suggested a linkage between controllability by others and anger in negative (failure) outcome. Some studies in achievement contexts supported this proposition (e.g., Russell & McAuley, 1986), but the present study failed to report any attribution-affect linkage for controllability. No support for the distinction between outcome-dependent and attribution-dependent affects, proposed by Weiner, was found in this study. There was no tendency for causal dimensions to be more significant mediators of happiness and disappointment, rather than pride and anger (see also McFarland & Ross, 1982).

Thus this Study 5.1 successfully measured intergroup attributions, especially in the majority group, and supported the link between causal dimensions and affect. A second study (Study 5.2) was carried out, in which an attempt was made to show modification of this bias among Muslims, as a function of crossing two main dichotomous social categorizations: religion and nationality (see Chapter 4). It also sought to replicate the relationship between causal dimensions and affect in a second study (Study 5.2). As already pointed out, the strong link between locus and pride, as suggested by Weiner, was found for both groups and provides indirect, empirical support that group-serving attributions may be linked to self-esteem. In addition, an attempt was made to assess the impact of these dimensions on new measures of self-esteem.

## 5.3 STUDY 5.2.

### 5.3.1 METHOD.

#### 5.3.1.1 Subjects.

One hundred and sixty-two (70 female, 92 male) Muslim students from the University of Rajshahi, Bangladesh participated in this study. The mean age was 21.7 (SD = 1.21) years.

#### 5.3.1.2 Design.

Subjects were randomly assigned to the eight cells of a 4 (categorization condition) x 2 (outcome: positive/negative) between-subjects design. The four categorization conditions were created by criss-crossing two dimensions of religious (Hindu/Muslim) and national (Bangladeshi/Indian) identity: (1) "double ingroup" (religion similar/country similar); (2) and (3) "crossed categorization" (religion similar/country different, and religion different/country similar); and (4) "double outgroup" (religion different/country different). There were 20 subjects in each cell, except two, in which there were 21.

#### 5.3.1.3 Stimulus materials.

The materials were the same as for Study 5.1, except for two changes. First, this study was conducted by employing a between-subjects design and two, rather than three stories were used (story 1: "householder" story 2: "passer-by"), to shorten the questionnaire. Second, at the end of the questionnaire, after the ratings of causal dimensions and affective reactions, subjects completed a self-esteem measure. Julian, Bishop and Fiedler's, (1966) version of the evaluative dimension of the semantic differential, which has been used successfully in intergroup research by Hogg and Sunderland (1991), was used. This consisted of nine bipolar scales, presented in the following order: pleasant-unpleasant, cold-warm, self-assured-hesitant, inefficient-efficient, fair-unfair, bad-good, friendly-

unfriendly, lazy-hard-working, close-distant. Subjects were instructed to respond in terms of "how you feel at the moment", by rating 7-point scales and this was repeated for all nine scales.

#### 5.3.1.4 Procedure.

Subjects were randomly assigned to conditions and questionnaires were distributed to their dormitory on an individual basis, by an experimenter of the same religious group as the subject, and were completed privately. Subjects were informed that there were no right or wrong answers, and assured that their answers would remain anonymous and an optional request was made to write their age and sex in completing the questionnaire. Originally 168 questionnaires were distributed. Six students (3.5%) either failed to return their questionnaires or returned them unanswered, therefore these cases are totally excluded from the analysis.

## 5.3.2 RESULTS AND DISCUSSION.

#### 5.3.2.1 Overview.

The data were analysed separately for causal attributions, causal dimensions, causal dimension-affect relations, and causal dimension-self-esteem relations. As preliminary analysis showed that there were no significant effects of sex of subject or story type, these factors were dropped from the analysis.

#### 5.3.2.2 Causal attributions.

Open-ended attributions were coded as positive, negative, neutral and unclassified following the guidelines set by the judges in Study 5.1. Then a number of cross-tabulation Chi-square tests were conducted to examine whether the employed attribution pattern differed as a function of religious and national categorization of the actor. Twelve (6 for each outcome condition) between

group comparisons were conducted employing 2 (religion/nationality of actor) x 2 (attributions: positive/negative) Chi-square analysis. Comparisons were made between "Bangladeshi Muslim" (double ingroup), "Indian Muslim" (in-outgroup), "Bangladeshi Hindu" (out-ingroup) and "Indian Hindu" (double outgroup) actors. Some free-responses which were coded as "unclassified" (including neutral) were excluded to simplify the analysis.[3] Attributions used in different conditions are reported in table 5.5.

Table 5.5. Classifications of Open-ended Attributions as a Function of Categorization of Target and outcome (Study: 5.2).

| | **Caregorization of Target Actor** | | | |
|---|---|---|---|---|
| | **Religion** | | | |
| | Ingroup | Outgroup | | |
| | **Country** | | | |
| Outcome/ Types of Attribution: | Ingroup | Outgroup | Ingroup | Outgroup |
| **Positive Outcome** | | | | |
| Positive | 40 | 36 | 19 | 24 |
| Negative | 0 | 5 | 16 | 14 |
| Unclassified | 0 | 1 | 5 | 2 |
| **Negative Outcome** | | | | |
| Positive | 20 | 18 | 7 | 8 |
| Negative | 17 | 21 | 31 | 33 |
| Unclassified | 2 | 1 | 2 | 1 |

Note: Attributions are counted across 2 stories.

For *positive outcome* $X^2$- tests revealed significant differences in the attributions for Bangladeshi Muslims and Bangladeshi Hindus (positive: 40 vs 19 and negative 0 vs 16; $X^2$ (1) = 23.25, $p$ <.0001); Bangladeshi Muslim and Indian Hindu (positive: 40 vs 24 and negative: 0 vs 14; $X^2$ (1) = 17.96, $p$ <.0001), Indian Muslim and Bangladeshi Hindu (positive: 36 vs 19 and negative: 5 vs 16; $X^2$ (1) = 10.61, $p$ <.01), Indian Muslim and Indian Hindus (positive: 36 vs 24 and negative: 5 vs 14; $X^2$ (1) = 6.56, $p$ <.01). In addition a significant effect was also found for Bangladeshi Muslim vs Indian Muslim (positive: 40 vs 36 and negative: 0 vs 5; $X^2$ (1) = 5.19, $p$ <.025).

For *negative outcome* significant categorization effects were yielded in comparisons between Bangladeshi Muslim and Bangadeshi Hindu (positive: 20 vs 7 and negative: 17 vs 31; $X^2$ (1) = 10.33, $p$ <.001), Bangladeshi Muslim and Indian Hindu (positive: 20 vs 8 and negative: 17 vs 33; $X^2$ (1) = 10.08, $p$ <.001), Indian Muslim and Bangladeshi Hindu (positive: 18 vs 7 and negative: 21 vs 31; $X^2$ (1) = 6.75, $p$ <.01) and Indian Muslim and Indian Hindu (positive: 18 vs 8 and negative: 21 vs 33; $X^2$ (1) = 6.47, $p$ <.01).

To summarize, these analyses on both positive and negative outcomes clearly reflect that target groups similar on the religious dimension received group-serving attributions (i.e., more positive and less negative attribution for positive outcome and the reverse for negative outcome) regardless of their national identity.

5.3.2.3 Causal dimensions.

The mean data for causal dimensions are shown in Table 5.6. A series of 4 (categorization of actor: double ingroup/in-outgroup/out-ingroup/double outgroup) x 2 (outcome: positive/negative) between-subjects ANOVAs were computed. Predicted categorization x outcome interactions were found on all four causal dimensions. These interaction effects are reported, followed by post

hoc tests between the means (see Table 5.6 and Figure 5.3). In each case, "double-ingroup" denotes shared group membership on dimensions of religion and nationality; "ingroup-outgroup" denotes same religious, but different national categorization; "outgroup-ingroup" denotes different religious, but same national categorization; and "double outgroup" denotes different group membership on both dimensions. The statistics summary tables for all the analyses are in Appendix F.

Locus of causality. Analysis of variance yielded no significant main effects. There was a highly significant categorization x outcome interaction, $F(3,154) = 35.04$, $p < .0001$. For the positive outcomes, ratings of internality were highest in the double-ingroup ($M = 6.48$), significantly lower in the ingroup-outgroup ($M = 5.60$), and lowest in the outgroup-ingroup ($M = 4.28$) and double-outgroup ($M = 4.15$) conditions. For the negative outcomes, attributions were significantly less internal in the same-religion ($M$s = double ingroup: 3.93 and in-outgroup: 4.13) than in the different-religion ($M$s = out-ingroup: 5.23 and double outgroup: 5.91) conditions. The outcome effect was significant in each condition. Attributions were more internal ($M$s = double ingroup: 6.48 and in-outgroup: 5.60) for same-religion positive acts, and less internal ($M$s = double ingroup: 3.93 and in-outgroup: 4.13) for same-religion negative acts. A reverse pattern was found for different-religion targets i.e., attributions were less internal ($M$s = out-ingroup: 4.28 and double outgroup: 4.15) for positive acts, and more internal ($M$s = out-ingroup: 5.23 and double outgroup: 5.91) for negative acts. Thus bias can be accentuated and attenuated by simultaneously crossing more than one social category.

Table 5.6. Mean Ratings and Standard Deviations on Causal Dimensions as a Function of Categorization of Target and Outcome (Study: 5.2).

| | **Categorization of Target Actor** | | | |
|---|---|---|---|---|
| | **Religion** | | | |
| | Ingroup | | Outgroup | |
| Causal Dimensions/ Outcome | **Country** | | | |
| | Ingroup | Outgroup | Ingroup | Outgroup |
| **Locus of causality** | | | | |
| Positive | 6.48 a/1 (.50) | 5.60 b/1 (.96) | 4.28 c/1 (.82) | 4.15 c/1 (1.18) |
| Negative | 3.93 a/2 (1.07) | 4.13 a/2 (1.22) | 5.23 b/2 (1.30) | 5.91 b/2 (1.35) |
| **Stability** | | | | |
| Positive | 5.65 a/1 (1.08) | 4.67 b/1 (1.53) | 3.00 c/1 (1.23) | 2.48 c/1 (1.03) |
| Negative | 2.43 a/2 (.97) | 3.20 a/2 (1.36) | 4.70 b/2 (1.42) | 5.41 b/2 (1.37) |
| **Controllability** | | | | |
| Positive | 3.78 a/1 (1.29) | 3.81 a/1 (1.54) | 5.15 b/1 (1.23) | 5.65 b/1 (1.18) |
| Negative | 5.63 a/2 (1.06) | 4.90 a/2 (1.71) | 3.73 b/2 (1.43) | 2.62 c/2 (1.13) |
| **Globality** | | | | |
| Positive | 5.90 a/1 (.97) | 5.62 a/1 (.96) | 3.55 b/1 (.83) | 3.05 b/1 (1.18) |
| Negative | 3.18 a/2 (1.20) | 3.83 a/2 (1.60) | 5.38 b/2 (1.05) | 5.69 b/2 (1.20) |

Note. High scores indicate that the cause was rated as Internal, Stable, Controllable by others and Global (on 7 point scale). a,b,c are horizontal (between categorization conditions), and 1,2 vertical (between outcome) comparisons. Means within each row or column that do not share a common letter or number are significantly different (horizontal: Newman-Keuls test $p < .05$, and vertical: Fisher's LSD simple main effect test, $p < .05$).

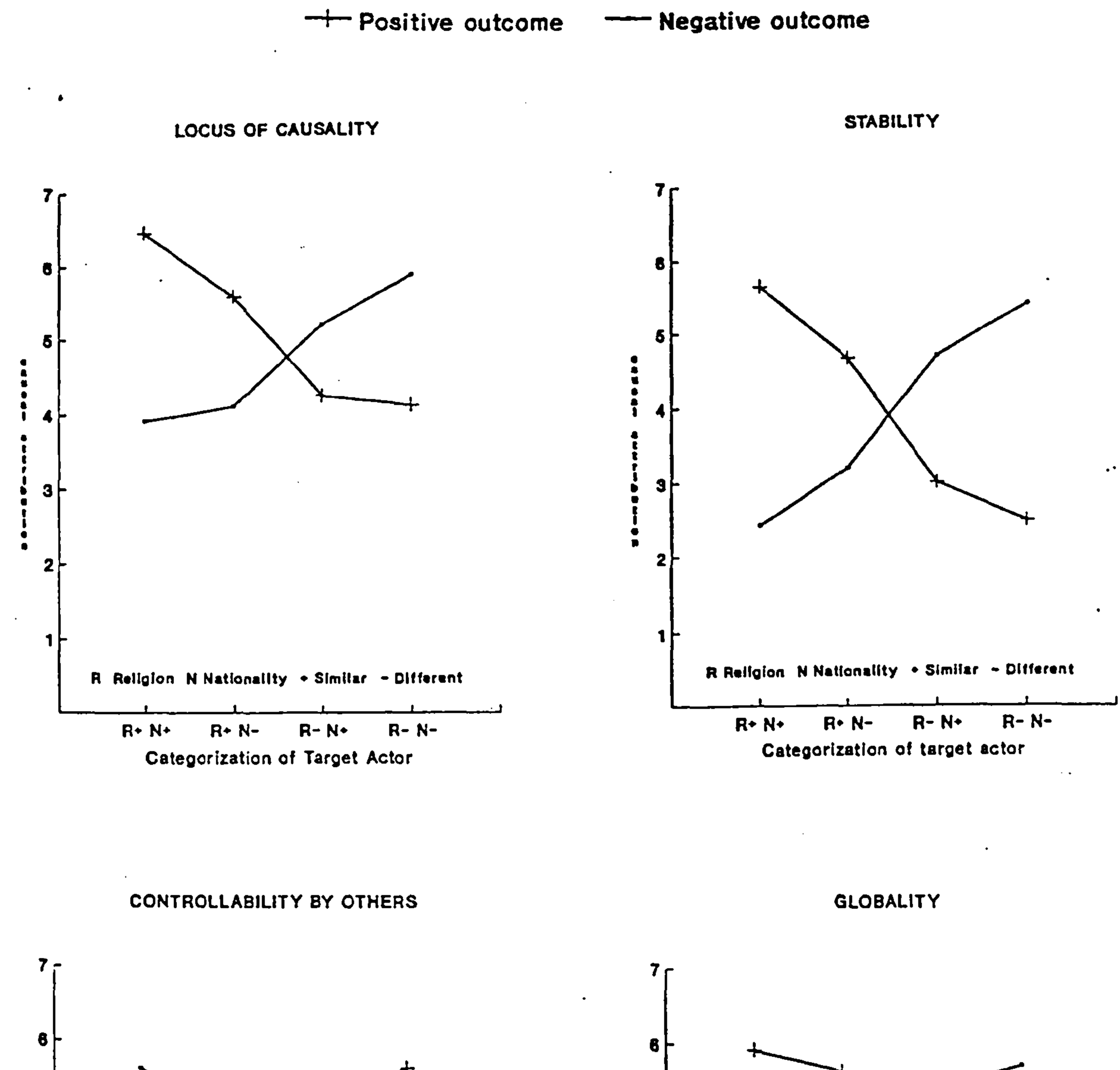


FIGURE 5.3 Mean Ratings on Causal Dimensions as a Function of Categorization of Target Actor and Outcome (Study 5.2)

Stability. For stability ratings, the categorization x outcome interaction was highly significant, $F(3,154) = 50.52$, $p < .0001$. For the positive outcomes, ratings of stability were highest in the double-ingroup ($M = 5.65$), significantly lower in the ingroup-outgroup ($M = 4.67$), and lowest in the outgroup-ingroup ($M = 3.00$) and double-outgroup ($M = 2.48$) conditions. For the negative outcomes, attributions were significantly less stable in the same-religion ($M$s = double ingroup: 2.43 and in-outgroup: 3.20) than in the different-religion ($M$s = out-ingroup: 4.70 and double outgroup: 5.41) conditions. The outcome effect was significant in each condition and the pattern of results was exactly the same as for locus.

Controllability. Again, only the categorization x outcome effect was significant, $F(3,154) = 28.84$, $p < .0001$. For positive outcomes, results were comparable with locus and stability with one exception, the only significant effect was for same-religion acts to be rated less controllable by others ($M$s = double ingroup: 3.78 and in-outgroup: 3.81) than were different-religion ($M$s = out-ingroup: 5.15 and double outgroup: 5.65) acts. For negative outcomes, the opposite was true, same-religion acts was rated more controllable by others ($M$s = double ingroup: 5.63 and in-outgroup: 4.90) than were different-religion ($M$s = out-ingroup: 3.73 and double outgroup: 2.62) acts. As can be seen from table 5.6, a clear double-outgroup response is visible; that is, ratings were especially low in the double-outgroup condition. The outcome effect was significant in each condition.

Globality. The categorization x outcome interaction was again highly significant, $F(3,154) = 54.10$, $p < .0001$. For positive outcomes, globality ratings were higher in the two same-religion acts ($M$s = double ingroup: 5.90 and in-outgroup: 5.62) versus two different-religion conditions ($M$s = out-ingroup: 3.55 and double outgroup: 3.05). For negative outcomes, ratings were simply lower in

the same-religion (*M*s = double ingroup: 3.18 and in-outgroup: 3.83) than in the different-religion conditions (*M*s = out-ingroup: 5.38 and double outgroup: 5.69). The outcome effect was significant in each condition and the pattern of results is highly comparable with reported results for other dimensions.

These results can be interpreted with reference to the models of crossed-categorization discussed in Chapter 4 (category dominance, additivity, category conjunction and hierarchical ordering; Brewer et al. (1987)). The clearest results from the analyses reported above concern the salience of the religious, compared with the national, categorization. This effect was found for both positive and negative outcomes, on all dimensions. The extent to which same-religion targets are favoured over different-religion targets is apparent from a series of further analyses on the same data, using 2 (religion: same/different) x 2 (country: same/different) x 2 (outcome: positive/negative) between-subjects ANOVAs.

These analyses reveal the psychological strength of the religious vs the national categorization dimension, if one compares the size of the religion x outcome and country x outcome interactions. On each dimension both effects were significant, but the religion x outcome effect was much greater (df = 1,154 in each case): locus of causality ($F = 97.30,\ p < .001$ vs $F = 7.65,\ p < .006$); stability ($F = 137.01,\ p < .0001$ vs $F = 14.10,\ p < .0001$); controllability ($F = 77.60,\ p < .0001$ vs $F = 7.91,\ p < .006$); globality ($F = 156.37,\ p < .0001$ vs $F = 5.91,\ p < .016$). Because the national (subordinate) categorization dimension was not ignored, these findings do not, strictly speaking, support the category dominance model; they do, however, provide powerful evidence that religious categorization dominates national categorization for subjects. From a historical perspective, this fact is hardly surprising; religious identity is, for these subjects, seven hundred years old, but national identity can only date from the founding of Bangladesh in 1971 (see Chapter 1).

Notwithstanding the category dominance effect, there is some support for the hierarchical ordering model too. For positive outcomes, on dimensions of locus and stability, Muslims only differentiated their ratings of same- and different-country targets when the target was classified as an ingroup member on the religious categorization dimension. In these cases, ratings of the double-ingroup target were especially positive. There was, however, some evidence of the opposite effect, namely differentiation between same- and different-country targets, only when the target was classified as an outgroup member on the religious categorization dimension. This latter effect occurred on controllability for negative acts, yielding especially derogatory ratings of the double-outgroup target. Thus across a range of dimensions, perceivers can apparently use their attributions quite generally to distinguish religious in- and out-group targets, but also more specifically, especially to favour double-ingroup targets and to derogate double-outgroup targets.

5.3.2.4 Causal dimension - affect relations.

Across all conditions, the predominant affective responses to positive outcomes were found to be happiness and pride (*M*s = 5.28 and 5.24), rather than disappointment and anger (*M*s = 2.46 and 2.10). The principal affective responses to negative outcomes were disappointment and anger (*M*s = 5.17 and 4.96), rather than happiness and pride (*M*s = 2.52 and 2.56). As in the previous study, separate multiple regressions for the two outcome-consistent affects in each experimental condition were computed, to predict affects from causal dimensions. The results of these analyses are reported in Tables 5.7 (positive outcome) and 5.8 (negative outcome). The detailed summary tables for all the regression analyses and intercorrelations between the predictor and criterion variables are in Appendix F. Because a between-subjects design was used, the

sample size is rather small, but still, five times as many subjects as predictors in each condition can justify computation of multiple regression analysis.

For the *positive affects*, the causal dimensions were found in combination to be significant predictors of both affects, but as in the previous study, the percentage of variance in affect scores that was accounted for varied widely across the four categorization conditions. It is clear from Table 5.7 that a substantial proportion of variance was explained only when the actor was a double-ingroup or ingroup-outgroup member. For the double-ingroup target, feelings of happiness (69%) and pride (66%) were maximized when the cause of a positive outcome was perceived as internal ($\beta = .406, F = 4.71, p < .05$ and $.515, F = 6.86, p < .02$). For the ingroup-outgroup target, both locus ($\beta = .531, F = 10.72, p < .01$) and globality ($\beta = -.455, F = 7.59, p < .015$) were significant predictors of happiness (68%). Feelings of happiness were maximized when the cause of a positive outcome was perceived as both internal and specific. However, there were no significant attributional predictors of pride.

For the *negative affects*, the predictive power of the causal dimensions was again strongest in the double-ingroup condition (see table 8). Feelings of disappointment (55%) were maximized when the cause of a negative act was perceived as uncontrollable by others ($\beta = -.472, F = 6.24, p < .025$) and global ($\beta = .462, F = 6.78, p < .02$). Feelings of anger (48%) were maximized when the cause was perceived as internal ($\beta = .607, F = 9.20, p < .01$).

*Table 5.7 Causal Dimension and Affect Relations for Positive Outcome as a Function of Religious Group of Respondent and Actor (Study 5.2).*

| | **Social Categorization of Target** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Religious Group Categorization** | | | | | | | |
| | Ingroup | | | | Outgroup | | | |
| | **National Group Categorization** | | | | | | | |
| | Ingroup | | Outgroup | | Ingroup | | Outgroup | |
| Affect / Predictor | Beta | F | Beta | F | Beta | F | Beta | F |
| **Happiness** | | | | | | | | |
| Locus of causality | .406 | 4.71* | .531 | 10.72** | -.098 | < 1 | -.378 | 2.35 |
| Stability | .249 | 1.55 | -.122 | < 1 | .209 | < 1 | -.134 | < 1 |
| Controllability | -.103 | < 1 | -.203 | 1.53 | -.283 | 1.14 | -.069 | < 1 |
| Globality | .352 | 2.55 | -.455 | 7.59* | .258 | < 1 | -.107 | < 1 |
| $R^2$ | .692 | | .684 | a | .143 | | .172 | |
| **Pride** | | | | | | | | |
| Locus of causality | .515 | 6.86* | -.400 | 2.34 | -.360 | 1.71 | -.135 | < 1 |
| Stability | .327 | 2.42 | -.080 | < 1 | -.123 | < 1 | -.054 | < 1 |
| Controllability | .132 | < 1 | -.167 | < 1 | .244 | < 1 | .322 | 1.32 |
| Globality | .187 | < 1 | .174 | < 1 | -.025 | < 1 | -.156 | < 1 |
| $R^2$ | .659 | | .179 | a | .138 | | .201 | |

Note. df = 1, 15 except where marked [a], where df = 1, 16, * $p < .05$ ** $p < .01$.

*Table 5.8 Causal Dimension and Affect Relations for Negative Outcome as a Function of Religious Group of Respondent and Actor (Study 5.2)*

| | **Social Categorization of Target** | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Religious Group Categorization** | | | | | | | |
| | Ingroup | | | | Outgroup | | | |
| | **National Group Categorization** | | | | | | | |
| | Ingroup | | Outgroup | | Ingroup | | Outgroup | |
| Affect / Predictor | Beta | F | Beta | F | Beta | F | Beta | F |
| **Disappointment** | | | | | | | | |
| Locus of causality | -.191 | 1.07 | .317 | 2.27 | .275 | < 1 | -.255 | < 1 |
| Stability | .118 | < 1 | .662 | 8.86** | -.191 | < 1 | -.494 | 4.49* |
| Controllability | -.472 | 6.24* | .275 | 1.84 | -.056 | < 1 | -.120 | < 1 |
| Globality | .462 | 6.78* | -.153 | < 1 | -.274 | < 1 | -.016 | < 1 |
| $R^2$ | .555 | | .434 | | .066 | | .378 | a |
| **Anger** | | | | | | | | |
| Locus of causality | .607 | 9.20** | .030 | < 1 | .573 | 2.97 | -.438 | 1.39 |
| Stability | .091 | < 1 | .565 | 5.99* | -.857 | 5.38* | -.178 | < 1 |
| Controllability | .117 | < 1 | .451 | 4.57* | -.197 | < 1 | -.094 | < 1 |
| Globality | .239 | 1.55 | .016 | < 1 | -.439 | 3.55 | .219 | < 1 |
| $R^2$ | .478 | | .389 | | .346 | | .141 | a |

Note df = 1, 15 except where marked [a], where df = 1, 16, * $p < .05$ ** $p < .01$.

For the ingroup-outgroup target, stability ($\beta$ = .662, $F$ = 8.86, $p$ <.01) was a significant predictor of disappointment (43%). And both stability ($\beta$ = .565, $F$ = 5.99, $p$ <.03) and controllability ($\beta$ = .451, $F$ = 4.57, $p$ <.05) were significant predictors of anger (39%). The values of $R^2$ were generally low in both the different-religion conditions. As can be seen, disappointment was significantly negatively mediated by stability ($\beta$ = -.494, $F$ = 4.49, $p$ <.05) for the double-outgroup target (38%). On the other hand, anger ($\beta$ = -.857, $F$ = 5.38, $p$ <.035) was significantly negatively mediated by stability for the outgroup-ingroup target (35%).

Thus causal dimensions were again significant predictors of both positive and negative affects, primarily for (religious) ingroup actors. Consistent with Study 5.1, locus was again the strongest predictor. The link between locus and pride (in the double-ingroup condition) supports the idea that group-serving attributions may have a positive effect on self-esteem. However, Weiner's (1986) suggested link between controllabitity and anger linkage was not very strongly supported in either study. This study also failed to support Weiner's suggested distinction between "attribution dependent" and "outcome dependent" affects.

5.3.2.5 Causal dimension - self-esteem relations.

Ratings were recoded (cold-warm, inefficient-efficient, bad-good and lazy-hardworking) so that high scores denote positive self-esteem. Scores were then averaged across the nine scales to form a reliable measure (Cronbach's alpha = .834), which then served as a criterion in a final set of multiple regressions. Although scores were quite high across the sample ($M$ = 5.93, $SD$ = .727), causal dimensions were significant predictors of self-esteem in three conditions (see Table 5.9).

Table 5.9. Multiple Regression for Predicting Self-esteem from Causal Dimensions as a Function of Categorization of Targets and Outcomes (Study 5.2).

| Crossed Categorization (Religion/Country)/ Predictors | Outcome: Positive Beta | Positive F | Negative Beta | Negative F |
|---|---|---|---|---|
| **Ingroup/Ingroup** | | (df. 1,14) | | (df. 1,15) |
| Locus of causality | .487 | 4.92 * | -.012 | < 1 |
| Stability | .090 | < 1 | -.237 | < 1 |
| Controllability | -.298 | 1.84 | -.089 | < 1 |
| Globality | .292 | 1.21 | .071 | < 1 |
| $R^2$ | .583 | | .047 | |
| **Ingroup/Outgroup** | | (df. 1,16) | | (df. 1,13) |
| Locus of causality | .020 | < 1 | -.472 | 3.51 |
| Stability | .064 | < 1 | .222 | < 1 |
| Controllability | -.386 | 2.23 | .031 | < 1 |
| Globality | .104 | < 1 | .279 | 1.03 |
| $R^2$ | .210 | | .298 | |
| **Outgroup/Ingroup** | | (df. 1,15) | | (df. 1,15) |
| Locus of causality | -.734 | 12.73 ** | .232 | < 1 |
| Stability | -.112 | < 1 | .467 | 1.48 |
| Controllability | .482 | 5.92 * | .266 | < 1 |
| Globality | -.389 | 4.02 | -.088 | < 1 |
| $R^2$ | .519 | | .294 | |
| **Outgroup/Outgroup** | | (df. 1,15) | | (df. 1,16) |
| Locus of causality | -.334 | 2.10 | -.150 | < 1 |
| Stability | -.033 | < 1 | .240 | 1.29 |
| Controllability | .265 | < 1 | -.044 | < 1 |
| Globality | -.148 | <1 | .631 | 4.71 * |
| $R^2$ | .277 | | .484 | |

Note. * $p < .05$, ** $p < .01$.

In the positive-outcome conditions, locus attributions ($\beta$ = .487, $F$ = 4.92, $p$ <.045) for "double-ingroup" members' acts significantly mediated self-esteem (58%). This finding is consistent with the relationship between locus and pride reported in both studies. In the "outgroup-ingroup" condition, the $R^2$ was again high (52%), but was mediated by perceptions of the cause as external ($\beta$ = -.734, $F$ = 12.73, $p$ <.01) and controllable by others ($\beta$ = .482, $F$ = 5.92, $p$ <.03). Thus self-esteem can be raised by explaining away positive acts by members of a highly comparable outgroup (Bangladeshi Hindu). Finally, in the negative-outcome conditions, there was only one significant effect. A "double-outgroup" member's act resulted in higher self-esteem (48%) when its cause was perceived as global ($\beta$ = .631, $F$ = 4.71, $p$ <.05). This pattern of self-esteem - attribution relations is quite consistent with Brewer's (1979b) discussion which suggested that self-esteem, and thus positive social identity, can be achieved by employing both ingroup serving and/or outgroup derogating strategies.

To summarize, Study 5.2 successfully modified intergroup attributional bias as a function of crossed categorization, and revealed significant relations between causal dimensions and both affects and self-esteem. A final study investigated whether bias by a minority group (normally quite restrained) could be accentuated by making salient social categorizations. In Study 5.3, two different orders of conditions were used. In one condition, intergroup evaluation preceded attribution rating and in other condition, attribution preceded evaluations (see below). It was predicted that the intergroup evaluation task preceding attribution ratings would make the intergroup situation more salient. Therefore, in this condition categorization effects would be stronger i.e., ingroup actor's positive and negative acts would be rated more favourably than the outgroup actor. In addition, outcome effects would be stronger in favour of the

ingroup in the condition where intergroup evaluations preceded attributions but in the other condition, the outgroup would be favoured as well as the ingroup.

## 5.4 STUDY 5.3.

### 5.4.1 METHOD.

#### 5.4.1.1 Subjects.

Sixty-five (15 female and 50 male) Hindu students from the University of Rajshahi, Bangladesh participated in the present study. The mean age was 21.65 years (SD = .99) ranging from 19 to 23.

#### 5.4.1.2 Design.

This experiment was used a 2 (order: intergroup evaluations-attributions/attributions-intergroup evaluations) x 2 (categorization of actor: ingroup/outgroup) x 2 (outcome: positive/negative) mixed design. Subjects were randomly assigned to the two order conditions (n = 32 and 33), manipulated between-subjects, and the remaining two factors were manipulated within-subjects.

#### 5.4.1.3 Stimulus materials.

The same two stories used in study 5.2 were again used. All possible combinations of the two stories, the actors' ethnic groups (Hindu/Muslim) and outcome (positive/negative) resulted in a total of 8 different paragraphs. These were presented in random order. Unlike Study 5.1 and 5.2 only causal dimensions were measured after the open-ended attribution was provided by the subject. In addition, two different orders of questionnaire materials were created. In order 1, subjects first rated ingroup and outgroup on 12 evaluative adjectives (cf. Taylor & Jaggi, 1974), and then completed the attribution task. The 12 adjectives included six positive (honest, patriotic, hospitable, cool-headed, intelligent and

open-minded) and six negative (aggressive, dominating, selfish, conservative, opportunist and disruptive) traits, presented in the fixed order so that positive and negative traits always followed each other. These were rated first for the ingroup, then the outgroup on 7-point scales (not at all characteristic, 1; very characteristic, 7). In order 2, these tasks were completed in the reverse order, that is, adjectives were rated after the ratings for attributions. Except for the order of adjective presentation, questionnaires were exactly the same for both groups.

#### 5.4.1.4 Procedure.

Questionnaires were distributed to subjects in their dormitory on an individual basis, by an experimenter of the same religious group as the subject, and were completed privately. Subjects were assured that their answers would remain anonymous. Originally 70 questionnaires were distributed. Five students (7%) either failed to return their questionnaires or returned them unanswered, therefore these cases are excluded from the analysis.

### 5.4.2 RESULTS AND DISCUSSION.

#### 5.4.2.1 Overview.

The data were analysed separately for intergroup evaluations, causal attributions and causal dimensions. As preliminary analysis revealed there were no significant effects of sex of subject or story type, these factors were dropped from the analysis.

#### 5.4.2.2 Intergroup evaluations.

Negative items (aggressive, dominating, selfish, conservative, opportunist and disruptive) were recoded, so that higher scores denote positive group evaluation,

and then ratings were averaged to form reliable scores for ingroup and outgroup targets (Cronbach's alpha = .783 and .771, respectively). Then a 2 (order: one/two) x 2 (target: ingroup/outgroup) ANOVA was computed, with repeated measures on the second factor. The only significant result was a main effect of target, $F(1,61) = 202.80$, $p < .001$, with the ingroup rated more positively ($M = 5.29$) than the outgroup ($M = 3.36$) target.

5.4.2.3 Causal attribution.

Open-ended attributions were coded as positive, negative, neutral and unclassified following the guidelines set by judges in the Study 5.1. Data were collapsed across stories (see table 5.10) and then cross-tabulation Chi-square tests were conducted to examine whether attribution patterns differed as a function of religious categorization of actor. As previous analysis failed to show any order effect, two within group comparisons were conducted employing 2 (Actors' religious group: Hindu/Muslim) x 2 (attributions: positive/negative) Chi-square analysis. The few free-responses which were coded as "unclassified" (including neutral) were excluded.

For positive outcome $X^2$- test revealed a significant difference in the attribution used for the ingroup and the outgroup actor, $X^2(1) = 13.85, p < .0001$. Subjects used more positive (115 vs 94) and fewer negative attributions (11 vs 34) for the ingroup than the outgroup. For negative outcome there was a non-significant categorization effect, $X^2(1) = 2.41$, *n.s.* (positive: 54 vs 42 and Negative: 73 vs 85).

Table 5.10. Classifications of Open-ended Attributions as a Function of Religious Group of Actor, Outcome and Order of Stimulus Presentation (Study 5.3).

| | **Religious Group of Actor** | | | |
|---|---|---|---|---|
| | Ingroup | | Outgroup | |
| | **Outcome** | | | |
| Order/ Types of Attribution: | Positive | Negative | Positive | Negative |
| **Order 1** | | | | |
| Positive | 54 | 26 | 43 | 19 |
| Negative | 7 | 36 | 21 | 44 |
| Unclassified | 2 | 2 | 0 | 1 |
| **Order 2** | | | | |
| Positive | 61 | 28 | 51 | 23 |
| Negative | 4 | 37 | 13 | 41 |
| Unclassified | 1 | 0 | 2 | 2 |
| **Both** | | | | |
| Positive | 115 | 54 | 94 | 42 |
| Negative | 11 | 73 | 34 | 85 |
| Unclassified | 3 | 2 | 2 | 3 |

Note: Attributions are counted across 2 stories.

5.4.2.4 Causal dimensions.

Ratings on each of the four causal dimensions were analysed using a 2 (order) x 2 (categorization of actor) x 2 (outcome) ANOVA, with repeated measures on the last two factors. For these analyses all main and interaction effects are reported below, followed by post hoc simple main effect tests between the means (see

Table 5.11 and Figure 5.4). The statistics summary tables for all the analyses are in Appendix F.

Locus of causality. ANOVA revealed a main effect only for outcome, $F(1,63) = 22.56$, $p < .0001$. There was a highly significant actor x outcome interaction, $F(1,63) = 67.09$, $p < .0001$, qualified by the order x actor x outcome effect, $F(1,63) = 10.49$, $p < .002$. As shown in Table 5.11 (Figure 5.4), the simple main effect test shows that overall there was a significant *categorization effect* in both orders. In order 1, (Fisher's LSD, within error term : MSE = .52, d.f. = 31) attributions were rated more internal for ingroup-positive ($M = 6.08$) than for outgroup-positive acts ($M = 4.91$). In order 2, (within error term: MSE = .69, d.f. = 32) the same pattern was replicated; the ingroup's act ($M = 5.85$) received more internal attribution than did the outgroup's ($M = 5.29$) act. But the bias was stronger in order 1, as shown if one compares the size of the effect for both orders (pairwise t-tests). For order 1, effect size for ingroup vs outgroup ratings was: $t(31) = 7.41$, $p < .0001$. Although significant, a much weaker effect was found for order 2, $t(32) = 2.57$, $p < .02$. A reversed pattern was found for negative acts in order 1, attributions were rated as less internal for ingroup-negative ($M = 4.05$) than for outgroup-negative acts ($M = 5.07$). However, in order 2 the categorization effect for negative outcome was not significant.

The *outcome effect* was also significant for the ingroup, that is, attributions were more internal for positive than negative acts in both orders 1 ($M$s = 6.08 vs 4.05) and 2 ($M$s = 5.85 vs 4.35). But this group serving attribution pattern was replicated for the outgroup only in order 2 ($M$s = 5.29 vs 4.74 for positive and negative, respectively). Thus, as predicted, positive and negative acts by an outgroup member were only differentiated in a favourable way when attributions preceded evaluations.

Table 5.11. Mean Ratings and Standard Deviations on Causal Dimensions as a Function of Categorization of Actor, Outcome, and Order (Study 5.3).

| | **Categorization of Actor** | | | |
|---|---|---|---|---|
| | Ingroup | | Outgroup | |
| | **Outcome** | | | |
| Casual Dimensions/ Order | Positive | Negative | Positive | Negative |
| **Locus of causality** | | | | |
| Order 1 | 6.08 a/1 (.84) | 4.05 b/1 (1.20) | 4.91 c/1 (1.06) | 5.07 c/1 (1.46) |
| Order 2 | 5.85 a/1 (.98) | 4.35 b/1 (1.49) | 5.29 c/2 (1.52) | 4.74 b/2 (1.68) |
| **Stability** | | | | |
| Order 1 | 5.56 (.82) | 3.41 (1.25) | 4.72 (1.03) | 4.27 (1.21) |
| Order 2 | 4.86 (1.36) | 3.53 (1.62) | 4.25 (1.56) | 3.85 (1.69) |
| Both | 5.21 a (1.17) | 3.47 b (1.44) | 4.49 c (1.34) | 4.05 d (1.48) |
| **Controllability** | | | | |
| Order 1 | 3.92 a/1 (1.12) | 4.66 b/1 (.95) | 4.70 b/1 (1.27) | 4.14 a/1 (1.13) |
| Order 2 | 4.53 a/2 (1.53) | 4.56 a/1 (1.50) | 4.71 a/1 (1.35) | 4.77 a/2 (1.43) |
| **Globality** | | | | |
| Order 1 | 5.87 a/1 (.92) | 3.89 b/1 (1.23) | 4.66 c/1 (1.07) | 4.72 c/1 (1.14) |
| Order 2 | 5.56 a/1 (1.11) | 4.46 b/2 (1.57) | 5.38 a/2 (5.38) | 4.80 b/1 (4.80) |

Note. High scores on causal dimensions indicate that the cause was rated Internal, Stable, Controllable by others and Global (on 7 point scale). a,b,c,d indicate horizontal (actor x outcome) effects and 1,2 indicate vertical (order) effects. Means within each row or column that do not share a common letter or number are significantly different (Fisher's LSD simple main effect test, $p < .05$).

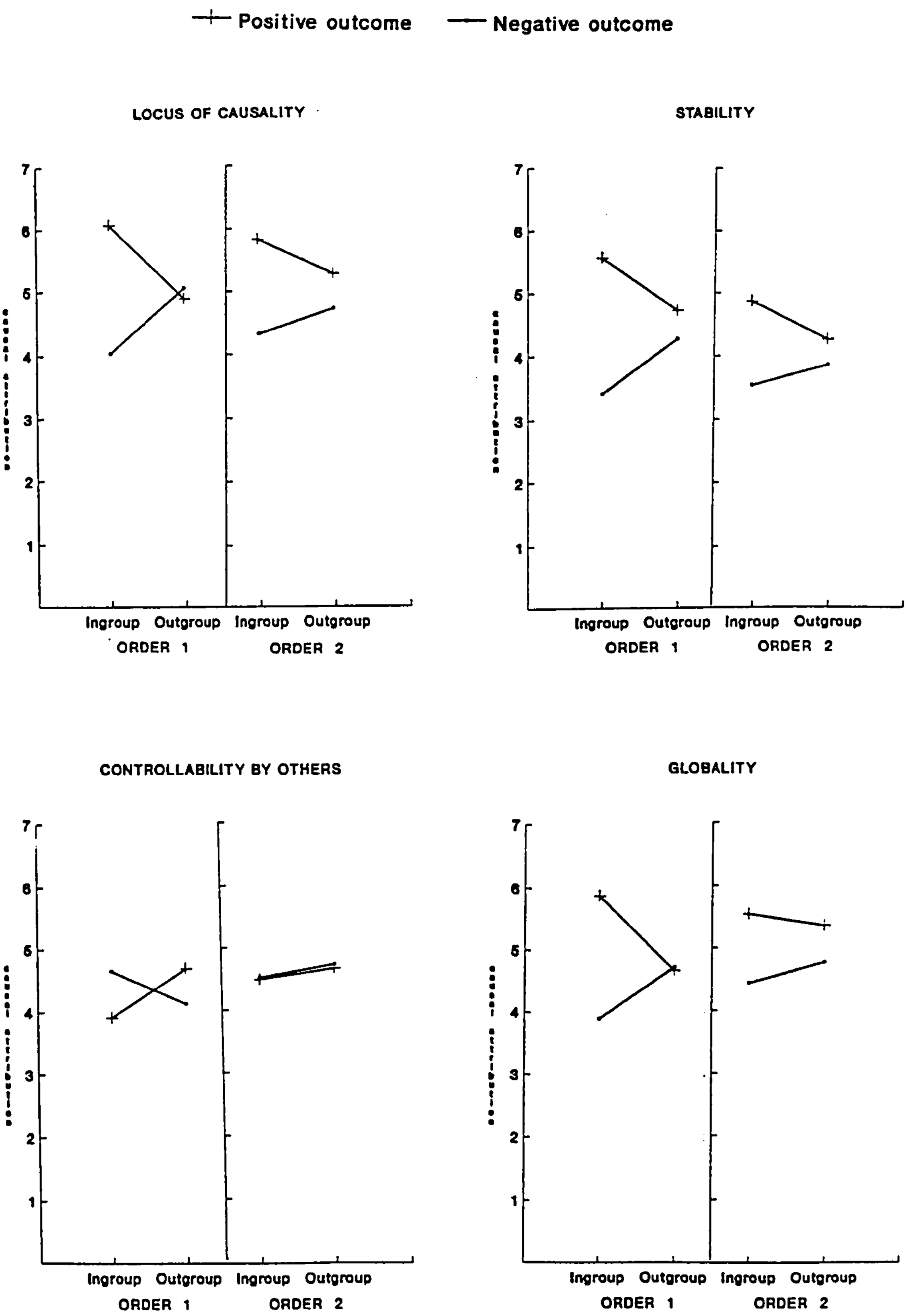


FIGURE 5.4 Mean Ratings on Causal Dimensions as a Function of Categorization of Target Actor and Outcome (Study 5.3)

Overall, bias was stronger in order 1 (within cell error term: MSE = .60, d.f. = 63), as shown by between order comparisons; there were significantly lower internal attributions for outgroup-positive (*M*s = 4.91 vs 5.29) acts and higher internal attributions for outgroup-negative (*M*s = 5.07 vs 4.74) acts in order 1.

Stability. Analysis revealed only one significant main effect for outcome, $F(1,63) = 32.04$, $p < .0001$. There was a significant actor x outcome interaction, $F(1,63) = 25.79$, $p < .0001$, but the three-way interaction was not significant, $F(1,63) = 2.27$, *n.s.* Post hoc tests (within cell error term: MSE = 1.09, d.f. = 63) revealed that attributions were rated more stable for ingroup-positive ($M = 5.21$) than outgroup-positive acts ($M = 4.49$). As one expects, a reversed pattern was found for negative outcome, that is, less stable ratings for ingroup-negative ($M = 3.47$) than for outgroup-negative ($M = 4.05$) acts. The outcome effect was significant for both in- and outgroup. For the ingroup, attributions were more stable for positive ($M = 5.21$) than negative ($M = 3.47$) acts and the same group serving pattern was replicated for the outgroup (*M*s = 4.49 vs 4.05).

Controllability. No significant main effects emerged from the analysis of variance. There were significant two-way actor x outcome, $F(1,63) = 6.44$, $p < .014$, and three-way order x actor x outcome, $F(1,63) = 7.07$, $p < .01$, interactions. Simple main effect tests (within cell error term: MSE = 1.23, d.f. = 31) revealed there were both categorization and outcome effects for order 1. Attributions were rated less controllable by others for ingroup-positive ($M = 3.92$) than for outgroup-positive ($M = 4.70$) acts, and more controllable by others for ingroup-negative ($M = 4.66$) than for outgroup-negative ($M = 4.14$) acts. Attributions were also rated less controllable for ingroup-positive ($M = 3.92$) than for ingroup-negative ($M = 4.66$), but more controllable for outgroup-positive ($M = 4.70$) than for outgroup-negative ($M = 4.14$) acts. Both

categorization and outcome effects were found to be non-significant in order 2 (within cell error term: MSE = .80, d.f. = 32). Thus bias was again stronger in order 1 in comparison with order 2 (within cell error term: MSE = 1.01, d.f. = 63), as shown by the especially low attributions of ingroup-positive (*M*s = 3.92 vs 4.53) and outgroup-negative (*M*s = 4.14 vs 4.77) acts to causes controllable by others.

Globality. ANOVA revealed a significant main effect only for outcome, $F(1,63) = 31.54$, $p < .0001$. There was a highly significant actor x outcome interaction, $F(1,63) = 31.82$, $p < .0001$, qualified by the order x actor x outcome effect, $F(1,63) = 11.02$, $p < .002$.

Post hoc tests (within cell error term: MSE = .59, d.f. = 31) revealed standard categorization and outcome effects for order 1. Attributions were rated more global for ingroup-positive ($M = 5.87$) than for outgroup-positive ($M = 4.66$) acts. Conversely attributions were rated less global for ingroup-negative ($M = 3.89$) than for outgroup-negative ($M = 4.72$) acts. The outcome effect was depicted by the fact that attributions were also more global for ingroup-positive ($M = 5.87$) than for ingroup-negative ($M = 3.89$) acts, but there was no differentiation of outgroup outcomes (*M*s = 4.66 vs 4.72 positive and negative, respectively).

Order 2 (within cell error term: MSE = 1.10, d.f. = 32) showed no categorization effect for positive or negative acts. However, the outcome effect was significant in both ingroup and outgroup conditions. Attributions were more global for ingroup-positive ($M = 5.56$) than for ingroup-negative ($M = 4.46$) acts. Similarly, causes of positive acts were rated more global ($M = 5.38$) than the causes of negative acts ($M = 4.80$) for the outgroup as well.

To summarize, order 1 clearly shows strong categorization effects for both in- and outgroup and outcome effects for ingroup. In contrast, order 2 failed

to show any categorization effect and outcome effects show both in- and outgroup favouring patterns. This finding is clearly replicated in the between-order comparisons (within cell error term: MSE = .85, d.f. = 63). Again bias was stronger in order 1 than order 2, as evidenced by the especially low attribution of ingroup-negative (*M*s = 3.89 vs 4.46) and outgroup-positive (*M*s = 4.66 vs 5.38) acts to global causes.

Thus Study 5.3 revealed that on three out of four causal dimensions there was stronger evidence of intergroup attributional bias when intergroup evaluations preceded attributions. Prior ratings of ingroup and outgroup on evaluative traits presumably increased the salience of social categorizations, which then had a greater impact on attributions. Thus, a relatively weak bias by a minority group can be accentuated.

## 5.5 GENERAL DISCUSSION.

The results of these three studies provide very strong support for the phenomenon of intergroup bias in causal attributions, demonstrate its affective consequences and reveal some of the factors that govern its extent in majority and minority groups.

This research dealt, first, with the methodological limitations of previous studies. All three studies successfully went beyond a simple reliance on internal-external attributions. As predicted, it was found that ethnocentric attributions could be internal, stable, uncontrollable by others or global for ingroup-positive and outgroup-negative acts, or external, unstable, controllable by others or specific for ingroup-negative and outgroup-positive acts. In the studies reported in this chapter, the nature of ethnocentric attributions was also clarified. Hewstone's (1990) review of studies on intergroup attributions for positive and negative outcomes reported "categorization effects", which compare the

attributions made for ingroup and outgroup acts, separately for positive and negative behaviours. Three studies reported in this chapter showed a consistently strong pattern of categorization effects (see below).

Hewstone also reported "outcome effects", which compare the attributions made for positive and negative behaviours, separately for ingroup and outgroup actors. For ingroup acts, the predicted effect is for ingroup-positive acts to receive more internal (stable, global and less controllable) attributions than ingroup-negative acts. In Study 5.1, this effect for Muslims was always found. For Hindus, this differential effect was significant on three dimensions. In Study 5.2, this effect was found on all dimensions for double-ingroup and ingroup-outgroup targets only. In Study 5.3, the effect was again very strong.

Although the categorization effect and the outcome effect for ingroup acts could both be considered "ingroup favouring", without being "outgroup derogating", the categorization effect itself can be regarded as "outgroup derogating". Evidence of outgroup derogation would be a categorization effect for both outcome conditions, whereby attributions are more internal (stable and global, and less controllable) for an ingroup than for an outgroup target for positive outcomes and the reverse for negative outcomes. A comparison of the three studies for this effect would show a convincing pattern. In study 5.1, Muslims showed outgroup derogation on all four dimensions for both outcome conditions, but Hindus showed this effect only once (in the negative outcome condition for the controllability dimension). In study 5.2, Muslims again showed this derogation for same- vs different religion targets, especially for outgroup-ingroup (in terms of religion and nationality) and double-outgroup targets on all dimensions for both outcome conditions. However, particularly in the positive outcome condition, ingroup-outgroup targets occasionally received this derogatory pattern. In study 5.3, the Hindus showed this effect in both outcome

conditions for locus and stability. However, for remaining dimensions this effect was only shown in order 1, where intergroup evaluations preceded attributions.

Stronger evidence of outgroup derogation would also be regarded as an outcome effect for the outgroup target, whereby attributions are more internal (stable and global, and less controllable) for negative than positive outcomes. A comparison of the three studies is most instructive in terms of this effect. In Study 5.1, Muslims showed outgroup derogation on all four dimensions, but Hindus never showed it. In Study 5.2, Muslims again showed this derogation of outgroup-ingroup (in terms of religion and nationality) and, especially, of double-outgroup targets on all dimensions. But in Study 5.3, the Hindus did show "ingroup favouring" but not "outgroup derogating" outcome effects. Thus there is strong evidence of ingroup-favouring attributions by members of minority and especially majority groups, but more blatant outgroup-derogating attributions are shown almost exclusively by members of the powerful numerical and social majority group.

In several studies, outgroup-favouring or ingroup-derogating attributions have been reported (e.g., Deaux & Emswiller, 1974; Hewstone & Ward, 1985) particularly with lower status and minority groups. Hindus as a social minority, however, did not show any sign of outgroup-favouring or ingroup-derogating attributions, but their weaker bias is consistent with many studies which suggest that bias should be lower among members of low-power insecure groups, but enhanced among members of high-power secure groups (e.g., Ng, 1984; Sachdev & Bourhis, 1985). These results again call into question the generalizability of group serving attributional biases and highlight the importance of social factors which can influence intergroup perception and relations (cf. Pettigrew, 1979). However, one paradox is that Hindus as a minority group did show strong intergroup discriminatory attitudes in previous studies (see Chapters 3 and 4) and

also on adjective ratings in Study 5.3, reported in this chapter. Recent studies suggest that different dependent measures like adjectives, attitudes and attributional dimensions may not coincide precisely. For example, Lynskey, Ward and Fletcher (1991) found no link between stereotypes and attribution ratings in a recent study.

The first two studies in this chapter also successfully investigated the affective consequences of intergroup attributions. The four causal dimensions all made significant contributions to the prediction of happiness and pride, following positive outcomes, and disappointment and anger, following negative outcomes. Substantial predictions were, however, found primarily in ingroup-outcome conditions. In Study 5.2, the locus dimension was the most powerful predictor of affects for both groups, as found in intra- and inter-personal studies (e.g., Russell & McAuley, 1986; Weiner et al., 1978, 1979). But globality attributions, which have only recently received attention in research on close relationships and which do not feature in Weiner's model, were also significant predictors for the Muslims, and had more impact than stability and controllability.

These results were fairly well replicated in Study 5.2, where again only outcomes associated with a double-outgroup or ingroup-outgroup actor tended to reveal causal dimension-affect relations. Thus, although no evidence to support the distinction between outcome-dependent and attribution-dependent affects was found, it was found that affective consequences of outcomes were mainly attribution-dependent for an ingroup actor, but were outcome-dependent for an outgroup actor. This finding implies a less thoughtful response to outgroup than ingroup behaviour and, in particular, allows ingroup outcomes to have a positive effect on group identity. Thus for both groups in Study 5.1, ingroup-positive outcomes resulted in pride via internal attributions. This effect was replicated in

Study 5.2 for the "double-ingroup" target, and in this condition self-esteem scores were also strongly associated with internal attributions.

Study 5.2 also revealed that self-esteem could be raised by "explaining away" outgroup-positive acts (cf. Pettigrew, 1979) and by attributing negative acts by a "double-outgroup" actor to a global cause. These findings lend some support to an interpretation of intergroup attributional bias in terms of social identity theory (see Hewstone, 1989). According to social identity theory (Tajfel & Turner, 1979) individuals define themselves to a large extent in terms of their social group membership and seek positive social identity or self-identification in terms of positive social group membership. In line with the theory, this study suggests that if group membership is salient, people use their attributions to enhance a positive self-esteem, thus social identity, by making internal attributions for socially desirable acts. In addition, it suggests that a positive social identity can be achieved via ingroup favouritism and/or outgroup derogation (see Brewer, 1979b). However, in line with a social identity perspective, future research should investigate the relationship between ingroup identification and intergroup attributions (Hewstone, 1990).

The final aim of this research was to identify factors that modify this bias. Study 5.2 revealed that the strong bias found for Muslims in Study 5.1 varied as a function of criss-crossed categorizations. There was a strong overall effect of more favourable attributions for same-religion vs different-religion targets, which can be interpreted as evidence of the category-dominance model (Brewer et al., 1987). There was also evidence of more differentiated responses to targets, taking account of their categorization on both religious and national categorization dimensions. The consequence of these responses was that Muslims both favoured double-ingroup and derogated double-outgroup members, but that these responses were attenuated when both categorizations were crossed

(particularly in the in-outgroup condition and occasionally in the out-ingroup condition as well). The final study completed the picture by demonstrating that the typically rather limited evidence of attributional bias by minority group members (e.g., Hindus in Study 5.1) could be accentuated by making social categorizations salient. There was, however, almost no evidence of minority group members making outgroup-derogating attributions. Perhaps their position in this kind of society is so tenuous, that more subtle forms of differentiation must be preferred (see also Hewstone & Ward, 1985).

To conclude, these three studies reported in this chapter present a compelling case for the importance of intergroup attributional bias. They provide highly significant evidence of the bias, using improved methodology and across a variety of experimental designs. They also reveal the conditions under which intergroup attributions have an impact on affects and self-esteem. Finally, this research increases our understanding of the factors governing the extent of this bias among members of majority and minority groups in a realistic setting.

Notes.

1. A pilot study in Bangladesh found that it made more sense to assess ratings of controllability by others, rather than by the actor. Particularly in negative outcome conditions subjects were confused by the fact that if the cause was controllable by the actor himself why did he not stop doing that undesirable act in the first instance? Several subjects asked this question.

2. Interactions among the causal dimensions in predicting the affect scores were also tested. All possible interactions were entered in hierarchical order in the equation. These interaction effects were all found to be nonsignificant.

3. Chi-square tests which included these unclassified attributions showed the same effects.

# CHAPTER 6

# CONCLUSIONS.

In this final chapter the main results of the empirical studies will firstly be considered in light of the contributions of social psychology to the understanding of Hindu-Muslim intergroup relations in Bangladesh. Secondly, attention will be devoted to some basic theoretical issues of intergroup relations which can be clarified from this research. Finally, limitations of the reported research and suggested future research directions will be discussed.

## 6.1. Contributions of Social Psychology to the Understanding of Intergroup Relations in Bangladesh.

To date not much research has been carried out applying social psychological knowledge to the understanding of intergroup relations in Bangladesh. In this respect these studies are valuable in their own right.

The study reported in Chapter 3 was based on one of the most prominent social psychological developments in intergroup relations, known as the "contact hypothesis". This study primarily aimed to investigate the impact of different dimensions of contact between Hindus and Muslims in Bangladesh. Contact between two groups is a normal event in this multicultural society. However, Muslims as the numerical and social majority possibly prefer to avoid contact with their minority counterpart. Hindus as the minority group, in this Muslim-dominated society, need to have greater contact for their survival, which is reflected in this research. One possible improvement could be achieved if more majority contact could be ensured with the minority. However, the amount of contact is not the sole mechanism required in order to improve relations between groups. The positive nature of contact is also regarded as an important factor. In

most of the societies where majority groups are socially dominating, status differences are likely to be involved within the contact. In Bangladeshi society, although Muslims claimed the contact was experienced with equal status, Hindus expressed a large status discrepancy. Majority-minority status discrepancy is mostly related to the socio-economic and political factors of any society. Therefore, this study suggests that in order to establish more harmonious intergroup relations, social planners and politicians should adopt such policies which help to minimize societal status differences. As a socio-economic majority, perhaps Muslims' contact with their minority counterpart is selective, thus this could easily ensure pleasant experiences, but for Hindus understandably contact was not experienced as so pleasant.

As can be seen from this study, both groups generally considered contact to have an individual basis. At least this individual awareness in contact has one advantage in that it minimizes the possibility of worsening the relations by treating the outgroup stereotypically or perceiving a uniformity of behaviour across ingroup members (Tajfel, 1978a). However, as far as Hewstone and Brown's model (1986) is concerned, failure to maintain intergroup boundaries could be a vital source of unsuccessful generalization of positive contact experience from the individual to the group as a whole in this society. As this is only a correlational study, this needs further investigation. Hindus in this society do not experience selective contact, therefore in a wide range of contacts they have to encounter more typical members of the outgroup. However, Muslims could easily avoid any encounter with typical Hindus. In addition, typical outgroup members in this society accommodate mainly negative characteristics that made minority group members especially aware of between group differences. Although Hindus reported that they had more contact with their majority counterpart, as a whole they encountered them in a more negative

context, which possibly prevented them from achieving a positive view of Muslims. In many cases Hindus have to encounter several Muslims which rather intensifies their anxiety and certainly has a negative effect on their attitudes towards Muslims. Hindus' attitudes towards Muslims revealed an important finding: as a minority group, Hindus do consider Muslims as an "outgroup" therefore disidentification with the ingroup or passing the boundary from one group to another, as suggested in social identity theory, would be very unlikely in this society.

Like many other studies, the study reported in Chapter 3 revealed that it is not only the amount of contact, but also the positive nature, for example, pleasantness of contact, cooperative and intimate contact, that may have a beneficial effect on attitudes towards an outgroup. This study also indicates that anxious encounters with a group can certainly have an adverse effect on outgroup attitude. In order to get any facilitating effect from intergroup contact it is necessary to identify the factors which cause and maintain intergroup anxiety. Obviously frequent contact with an outgroup may help to minimize this anxiety, but there is a need to ensure that the contact target must have fewer negative typical group characteristics. In addition, differences between groups should not be highlighted too much in the contact setting. It is noted that in this culture both the typicality of the outgroup member and the highlighted differences between groups have a negative effect on intergroup attitude.

One of the most negative aspects of intergroup perception could be to consider the outgroup as a homogeneous entity and, in terms of negative characteristics, to consider them as interchangeable. This study revealed that both groups perceived the outgroup in terms of within-group homogeneity. This could be an undesirable and harmful factor in intergroup relations in Bangladesh. This study suggests that in order to perceive an outgroup as variable,

the first important factor would be to ensure that there is ample opportunity for intergroup contact so that each group can obtain knowledge about the variability of the other group. In addition, it is important to subdue the characteristics of typical group members because this facilitates intergroup anxiety, intensifies awareness of between group differences and also produces adverse effects on variability judgements of the outgroup.

This study, as a whole, increases our understanding of the determinants and consequences of different aspects of Hindu-Muslim intergroup contact in Bangladesh. In conclusion, the recommendation would be that institutional support is needed in Bangladesh to ensure the positive nature of contact. Interdependent and cooperative tasks could be set up particularly in educational institutions so that majority Muslims are encouraged to have more frequent contact with Hindus. In addition, national educational curricula should highlight possible between-group similarities as well as basic between-group differences. This may counterbalance the effects and present both in- and outgroup in a more realistic context. This should also present groups in a way which helps to prevent perceiving the outgroup as a homogeneous entity. It is also important to teach children that a typical Hindu or Muslim may possess negative as well as positive characteristics and that this is a common feature in any society.

Studies reported in Chapter 4 mainly emerged from the theoretical developments in social identity and social categorization in intergroup relations. Social psychological studies suggest salience of social categorization is one of the vital sources of intergroup discriminatory behaviour. There are many ways in which intergroup discrimination can be attenuated, for example by presenting outgroup members in terms of their individual identity, diminishing intergroup boundaries, creating overlapping social structure (see Wilder, 1986a). In Chapter 4, two studies assessed whether crossing two different identities could forge a

shared identity and attenuate intergroup discrimination. In study 4.1, where religious and national identity were a crossed, both groups showed a dominant response for their religious identity. The shared identity was not conceived by either group. This simply means that religion is considered as an elementary source of identity in this multicultural society. In Study 4.2, where linguistic identity was added, the results again showed a clear dominance of religious categorization. It was thought that language was a shared identity for Hindus and Muslims in greater Bengal for a thousand years and it was one of the core contents in the independent movement of Bangladesh, therefore it might have a significant meaning to Hindus and Muslims in Bangladesh (see Chapter 1). Yet, apart from religious identity, Hindus virtually ignored the importance of all other dimensions. However, Muslims showed a hierarchical structure to three dimensions, where religious identity was predominant. In the same study Hindus expressed a comparatively lower religious social identity than did Muslims. One may, speculate that in this Muslim majority society their religious identity was constantly threatened and this may have resulted in putting greater emphasis on religion as the differentiating dimension.

The two studies reported in Chapter 4 clearly suggest that as one category dimension like religion has been regarded as a dominating source of identity, any attempt to present a shared identity structure may not be accepted in this society. Differences are so fundamental that although inter-religious marriage could have some beneficiary effect, it would not be possible to introduce it to this culture. Although Bangladesh was created to challenge the imposed "two nation theory" by Pakistani politicians, secularism as a basic state principle is no longer in practice. In countries like Iran and Algeria, religious fundamentalism in Muslims has been on the increase over the past few years. As Hindus are the majority in the greater Indian context, they have also started seeking support from outside as

their identity has already been threatened in this society. Studies reported in Chapter 4 clearly suggest that religious categorization is already very salient in Bangladeshi society, therefore any further increase in religious fundamentalism would have a devastating effect upon this poor third world country. Government and social planners should review the whole context in light of this reality.

Studies reported in Chapter 5 developed from the application of interpersonal attribution processes to real-life intergroup contexts. As this is a relatively new area of social cognition and intergroup relations, the main aim was to enhance our theoretical understanding concerning several new issues like relations between attribution and affect or attributions and self-esteem. However, apart from theoretical implications, there are some practical hints directly related to Hindu-Muslim intergroup relations in Bangladesh which may also be noted. Although in previous studies Muslims showed a moderately neutral attitude towards minority Hindus, Study 5.1 reported in this chapter reflects a different picture. It suggests that in an intergroup context, despite holding a less negative attitude towards a dominated minority group, people may employ a discriminatory strategy in explaining outgroup behaviour. Perhaps Hindus in this society are regarded as "scapegoats", thus their behaviour is often explained in a negatively biased manner. In societies like this, where status differences are enormous, ascription of undue causality to a minority group may be a common strategy (cf. Hewstone & Ward, 1985). However, as a socio-numeric minority, Hindus have a clear idea that in explaining the majority group's behaviour, a biased response is simply non-normative, therefore they are cautious and practical. Clearly this is a non-biased outgroup response, but considering findings in previous studies, absence of bias by Hindus could be an "attributional reaction formation". Findings in this study provide a new line of thinking for our educationists and social planners. Children in these societies

should be taught that the "scapegoat" principle, as a means of explaining a minority group's behaviour, is nothing but an impractical and unacceptable strategy.

Study 5.2 in this chapter made an attempt to attenuate this bias for Muslims by introducing a shared religious and national identity. Only in a few cases was this overlapping category structure able to attenuate discriminatory causal explanations. Overall findings were very similar to those of the studies reported in Chapter 4, where religion as a category dimension showed a dominating effect. Study 5.3 aimed to investigate the effect of category salience on attributional bias by minority Hindus, who showed virtually no sign of bias in explaining the outgroup's behaviour in Study 5.1. It was noted that factors which increase the salience of group categorization can accentuate a minority group's attributional bias. Therefore, in order to achieve facilitating effects, any factor which may promote an increase in the "intergroup" category structure, should be avoided in this society. Motivational (self-esteem) and affective relations have also been identified with attributional bias in these studies. These may also have practical implications for explaining intergroup relations but as was mentioned earlier, these are new developments, and thus further theoretical investigation is needed in order to uncover the full picture.

To summarize, while the study reported in Chapter 3 specified the nature of contact involved in Hindu-Muslim intergroup encounters in Bangladesh, studies in Chapter 4 identified religion as the dominating category identity for Hindus and Muslims in Bangladesh, which in turn hinders achieving any shared identity which may help to improve intergroup relations between these two groups. Studies in Chapter 5 showed how attribution as a primary cognitive process works in this majority and minority context. While the majority group used a "scapegoat" strategy in order to explain behaviours of the minority, the

minority group appeared simply too afraid to show any bias in explaining majority group's behaviours.

## 6.2 Contributions of This Research to The Social Psychology of Intergroup Relations.

The present section attempts to integrate and highlight the theoretical import of empirical findings for the social psychology of intergroup relations. In recent years there has been a widespread questioning of socio-psychological theories which seem to confine themselves to narrow experimental situations and neglect the relevant and significant influences of "real life" social processes. This major shortcoming of recent social cognition and intergroup relations research was reflected more than a decade ago in the writings of one of the outstanding European experimental social psychologists:

> "A true social-psychological approach cannot afford to ignore the fact that all social interactions occur among individuals who occupy determined positions within a social context. This broader social context extends far beyond the specific situation studied by the experimenter, even while being part of it." (Doise, 1978; p. 51)

It is therefore very important to know to what extent these experimental findings really coincide with "real life" social contexts. Following this approach, studies reported in this thesis emerged from the interplay of certain wider social contextual variables, e.g., religious, national and linguistic group preference and identity, intergroup contact, crossed-category societal structure and socio-numeric majority-minority context. A wide array of complex findings have been obtained through the six empirical studies carried out in a real-life context. In this section an attempt will be made to examine some of the main findings

obtained and to point out their theoretical implications for the literature on social cognition and intergroup relations.

In Chapter 3 some of the basic and recent developments of the "contact hypothesis" were investigated. Theory predicts mere contact is not enough, rather the positive nature of contact will have a real beneficiary effect on intergroup relations. This prediction has been largely confirmed in the present research. Of course, frequency and amount of contact have an interrelated effect as the positive nature of an interaction can only be experienced if people get ample opportunity for meeting each other.

One recent influential controversy in the contact hypotheses should be emphasised. In order to get positive results, should contact between groups highlight inter-individual aspects of contact so that intergroup cues are suppressed or, conversely, should differential group aspects be emphasised so that it takes place in an intergroup context? This study failed to support the idea that contact experienced on an inter-individual basis has any beneficiary effect. Perhaps development of interpersonal relationships and reduction of group boundaries, as advocated by Brewer and Miller (1984) are not always necessary. Hewstone and Brown (1986) argued that positive contact experience would be generalized from individual group member to the group as a whole only if it took place with "typical" members of the outgroup in an intergroup context. Recently convincing experimental evidence has shown that where group boundaries were maintained, perceptions of stereotype disconfirming exemplars generalized to ratings of the overall group stereotype (Johnston, 1991). The present research, however, added a vital point to this "typicality-generalizibility hypothesis", that in many real-life situations, particularly where intergroup disharmony is intense and basic differences are highly incompatible, a "typical" member of an outgroup is often perceived with typical negative group characteristics. Facing a "typical"

member in this case is most likely to produce an anxious encounter and one principal consequence of that is avoidance of contact (see Stephan & Stephan, 1985). This research clearly suggests that "typicality" may have different meaning in real-life and experimental situations. In line with Pettigrew (1986), this research implies that in intergroup contact there are many more factors involved than simply 'cold' cognition. This research suggests that where the social status hierarchy is sharp, an extensive attempt to highlight intergroup differences in intergroup contact would cause negative affect and anxiety which would hinder achievement of positive behavioural consequences. Thus, intergroup similarity and differentiation are both important in intergroup contact but there should be an trade-off between the two (Hewstone & Brown, 1986; Pettigrew, 1986).

This is the first attempt to correlate affect and cognition with real-life intergroup contact. Stephan and Stephan's (1985) model suggests that prior intergroup relations (e.g., amount and type of contact), intergroup cognitions (e.g., stereotypes, dissimilarity etc.) and situational factors (e.g., societal structure, status etc.) influence intergroup anxiety which in turn affects our behavioural (response amplification), cognitive (information processing and motivational bias) and affective (augmented emotions, polarized evaluations) responses. This study largely validated this model. In the same vein, this study suggests that negative affective states have a significant linkage with cognitive experiences like typicality/atypicality of outgroup members and also with awareness of intergroup differences. Future studies should investigate this linkage more elaborately.

This research addresses several significant issues such as the amount of contact and variability, and most interestingly, the relation between anxiety and perceived outgroup variability. Contrary to many laboratory based studies (see Park, Judd & Ryan, 1991) this study shows that greater contact (familiarity) with

the outgroup resulted in the group being perceived as more variable. This finding also supports the suggestion that perceived outgroup variability be incorporated as an outcome measure in contact research (Linville et al., 1986; Park & Judd, 1990). Contact in experimentally manipulated conditions and in real-life conditions differs in its dimensional, situational and temporal complexity. Thus, real life contact should have significant implications for perceiving the outgroup in terms of its within-group variability.

How perceived variability is related to the process of attitude/stereotype formation and change is theoretically still an unresolved issue. Much of the social cognition and intergroup relations literature suggests that perceiving an outgroup as variable helps to prevent generalization of negative individual contact experience across group members (see Rothbart & John, 1985; Park, Judd and Ryan, 1991). This study suggests that anxious encounters with an outgroup have a significantly negative effect on people's perceived variability judgement of that group. Intergroup anxiety also prevents development and change of attitude towards an outgroup in a positive direction. It is interesting to note that contact had a greater impact on perceived variability than on outgroup attitudes. But this correlational study specifically did not convincingly prove a direct link between perceived outgroup variability and attitudes towards the outgroup. Perhaps an unidentified mediating factor may work between perceived variability and formation and change of outgroup attitudes and stereotypes (central tendencies) which hopefully will be recognized in future research.

Social identity theory suggests that differentiation between in- and outgroup provides a means of promoting positive social identity for the members of both minority and majority groups. An experimental study by Sachdev and Bourhis (1987), however, suggests that minority group members discriminated less than majority group members by acknowledging the superiority of the

majority group. However, in this study, a minority group in which this status hierarchy was consensual, showed a negative attitude towards a socio-numeric majority. This finding is rather consistent with studies reported by Branthwaite, Doyle and Lightbown, (1979) and Vleeming (1983) where low status or underprivileged groups showed more ingroup favouritism and higher hostility.[1] One possible explanation for this could be the greater salience of minority group membership in the self-concept (McGuire, McGuire & Winton, 1979), as reflected in one of the studies reported in Chapter 4 in which the minority group showed a dominant pattern of religious categorization (see Study 4.2). Alternatively, this discrimination may also be a strategy to deal with the *relative* insecure and negative social identity (as shown in Study 4.2) for this numerical and social minority (see Brown & Smith, 1989).

As is evident from the discussion in Chapter 2, social identity theory maintains that categorizing people into two distinct groups plays a crucial role in instigating intergroup discrimination, although the reason for this may not only be cognitive but also motivational. Studies suggest that shared membership in more than one category may help to break down the dichotomous cognitive structure of the group and improve intergroup evaluations. Studies reported in Chapter 4 investigated to what extent this finding can be replicated in real-life group situations. In Study 4.1, where Hindu and Muslim subjects' religious and national identity were overlapped, both groups' religious categorization dominated the national categorization. In study 4.2, where linguistic identity was added with two other crossed categorizations, Hindus showed a clear religious dominance model, and Muslims showed a hierarchical ordering model where religion, nationality and linguistic identity manifested a hierarchical importance.

Many theoretical models have been put forward to interpret intergroup behaviour in this crossed-categorization social structure. The problem is, these

hypotheses are mainly adopted from laboratory based studies which failed to consider the psychological and emotional significance of real-life group membership. Traditional social identity theory (Tajfel & Turner, 1979; Brown & Turner, 1979) predicts that as intergroup discrimination is primarily motivational, even in crossed conditions people will utilize the same strategy of intergroup discrimination. Therefore crossing one group with another may not bring any facilitative effect. According to the category differentiation model (Doise, 1978), crossing of two categorizations leads to convergence between, and divergence within, categories, thereby weakening inter- and intra-class effects. This model predicts no discrimination against groups which are outgroup on only one categorization dimension. In addition to these two main hypotheses, there are some supplementary models (category dominance, additive, category conjunction and hierarchical ordering) which have been proposed to explain intergroup evaluation in crossed-categorization structure. The reported studies support neither social identity nor the category differentiation model. To be specific, these studies suggest rather that, as real-life categorizations rarely have equal psychological and emotional importance, the category dominance model is the most useful model in explaining intergroup behaviour in a crossed-categorization societal structure.

Both social identity and category differentiation models predict that an outgroup differing on both dimensions ("double outgroup") should be additively discriminated against. Although there is evidence for this prediction in some laboratory based studies (see Vanbeselaere, 1991), overall this was not confirmed in this research (but see Study 4.2, Muslim Subjects). The most important thing is that, while existing models predict no difference between "half-outgroups" in terms of discrimination, this research suggests that where categorization dimensions have unequal psychological importance, which is a common case in

any real-life social situation, people's evaluation of two "half-outgroups" may vary significantly. Altogether this research highlights the fact that crossed-categorization situation do not always constitute an "intergroup" situation as social identity theory suggests (see Brown & Turner, 1979), nor do they always break down the "intergroup" structure as the category differentiation model (Doise, 1978) suggests. Extending social identity theory, Brown and Turner (1979) postulated that in crossed categorization conditions people might have difficulty in defining themselves because of the contradictory category structure but their desire for achieving a positive self-esteem would be unchanged in such structure. In the reported research self-esteem did not vary across conditions. The relation between intergroup discrimination and self-esteem is still a controversial issue even in dichotomous societal structure, thus, this relation in crossed-societal structure should be investigated with caution. However, in any case where social categorization no longer fulfils the functions of systematizing and simplifying the social world the link between intergroup discrimination and self-esteem in such a structure may become weakened.

Research has failed to look at one aspect of crossed-categorization phenomenon, that is what processes are involved in the reduction or absence of discrimination in these situations. Many assumptions have been suggested such as decreased category salience, eliminated perceptual boundaries, enhanced perceived similarity, break down of perceived variability and enhanced awareness of common group membership. Reported studies in Chapter 4 dealt with one of these untested hypotheses proposed by Tajfel (1982), that crossed categorization breaks down the perceived homogeneity of the outgroup. Different measures of perceived variability were used to test this hypothesis but neither study supported this assumption.

Although studies on social cognition suggest that an outgroup is more likely to be perceived as less variable than an ingroup (for a review see Park, Judd & Ryan, 1991), this research suggests that a more influential determinant of perceived variability was the majority or minority status of respondent and target groups. While a socio-numeric majority group (Muslims in Bangladesh) perceived themselves as more variable than all other target groups (see Study 4.2), the minority group perceived themselves as comparatively more homogeneous than the other target groups (see Study 4.1). These results are consistent with previous studies that reported an "ingroup homogeneity effect" for members of minorities (see Simon, in press) and warn of the danger of ignoring societal factors in social cognition and intergroup relations research. This research suggests that when a low status group has their identity threatened by a high status majority group, they may consider themselves as homogeneous in order to perceive the group as cohesive and also to use discrimination to establish a more positive ingroup identity and avenge the imbalance in status (see Branthwaite, Doyle & Lightbown, 1979).

In Chapter 5 an impressive body of evidence has been cited concerning how social categorization constitutes a fundamental influence in causal attributions. Allport's (1954) classic analysis of prejudice mentioned a number of attributional implications of scapegoating, usually directed to a weak but identifiable minority. There is now ample evidence that attributions vary as a function of the social categorization of the actor. It is important to note that contact is a setting in which expectations about an outgroup are altered by realities. Thus, at least in an implicit sense, the contact hypothesis suggests that positive contact would disconfirm negative expectancies about the outgroup and that this would therefore lead to the growth of liking and respect for that outgroup. One major issue in the reduction of intergroup disharmony is how

perceivers react to situational information about the outgroup that disconfirms their negative expectancies. In this respect, an attributional approach is most valuable in underlining how intergroup disharmony is maintained, by giving different attributions for the same act by ingroup and outgroup members.

There were several methodological and conceptual shortcomings which limited the applicability of the existing intergroup attribution research. Conceptually, existing research relied upon Heider's (1958) unidimensional internal-external distinction. Moreover, doubt can be cast over utilising a forced-choice single rating-scale measure to assess subjects' causal attributions (see Hewstone, 1990; Miller, Smith, & Uleman, 1981). Studies reported in Chapter 5 tackled these limitations using an improved methodology which allowed subjects to give their free-response and then a detailed assessment of causal dimensions. Apart from utilizing Weiner's (1979, 1986) sophisticated multidimensional approach to the structure of causality, the utilization of open-ended measures of causation may also have been useful (Semin & Fiedler, 1988). Unlike many studies, this research tested both categorization and outcome effects (Hewstone, 1990), which offered a clearer picture of attributional bias. In Study 5.1, the Muslim majority group showed a robust attributional bias but as a socio-numeric minority, Hindus did not show any bias. These results are consistent with studies which confirmed societal factors as the most influential element in attribution-related intergroup perception and relations (Hewstone & Ward, 1985).

A recent review of intergroup attribution has highlighted the importance of identifying factors that may accentuate or attenuate the attributional bias (Hewstone, 1990). In experimental studies, manipulation of such factors is easy but in real-life studies these manipulations are difficult. However, in Study 5.2, a crossed-categorization structure was adapted as previous studies on intergroup relations showed this could be an effective factor in accentuating intergroup bias.

Studies reported in Chapter 4 highlighted the imbalance in the psychological and emotional significance of real-life categories; therefore, crossing one category with another most often results in dominance of a single category. This finding was mostly replicated in Study 5.2, where hierarchically religious categorization dominated national categorization. There were a few cases where bias by majority group (Muslim) members was accentuated in crossed-conditions, but the overall pattern was that target groups similar on the religious dimension received group-serving attributions (i.e., more positive and less negative attribution for positive outcome and the reverse for negative outcome) regardless of their national identity. One additional point is that Hewstone (1990) suggested a comparison between within- and between-subjects designs within the same study. Although comparison within the same study is not possible here, as can be seen, Muslim subjects' response for ingroup (Bangladeshi Muslim) and outgroup (Bangladeshi Hindu) in study 5.1 (within-subjects) and study 5.2 (between-subjects) are highly comparable, thus confirming that both procedures are equally applicable in an intergroup attribution study.

The final study investigated whether bias by a minority group (normally quite restrained) could be accentuated by making salient social categorization. There are many studies which provide evidence that the cognitive relevance of the distinction between two categories leads to perception of inter-category differences (e.g., Capozza & Nanni, 1986). Following this idea, it was predicted that the intergroup evaluation task preceding attribution ratings would make the intergroup situation more salient. Therefore, in this condition attributional intergroup bias would be stronger than the condition in which attribution preceded intergroup evaluation. In general, this hypothesis was confirmed. This provides clear evidence of how salient social categorization may be an obvious method for refining attributions and also shows that where group differences are

intensely highlighted, conflict-maintaining attributions are more likely to be sustained.

Current social cognition and intergroup relations research has received much criticism for its failure to integrate cognitive, affective and motivational factors in their investigation. However, somewhat belatedly, research has already started looking for these major processes in intergroup relations and started to offer potential new directions for future integration (e.g., Johnston, 1991). Interest in the affective consequences of causal attributions has been increasing. The major contribution in this area is Weiner's attributional theory of motivation and emotion, developed as a result of convincing empirical evidence related to interpersonal achievement contexts (see Weiner, 1986). To date, a great deal of research has examined how specific causal attributions and causal dimensions influence affective reactions to interpersonal success and failure (see Russell & McAuley, 1986 for a discussion). Unfortunately no research has yet been conducted to relate attribution and affect at an intergroup level. Weiner has made an important distinction between two kinds of achievement-related affects: "outcome-dependent" and "attribution-dependent" affects. Outcome-dependent affects are very general positive or negative reactions that are experienced following success and failure outcomes, irrespective of the causal attribution made for the outcome. Attribution-linked affects, in contrast, are influenced by the specific causal attribution for the outcome. According to Weiner, both causal attributions and their underlying causal dimensions generate more differentiated affects. This view has recently been supported by Russell and McAuley (1986).

The studies reported in Chapter 5 tested this linkage between the underlying causal dimensions and specific affects proposed by Weiner (1986) in his general theory of motivation and emotion. Weiner (1986) suggests success attributed internally will result in greater self-esteem (pride) but failure

attributed internally will result in lower self-esteem. This relationship between locus and self-esteem is directly relevant to the self/group-serving bias. In both studies this link between locus of causality and pride received convincing support. In both studies, the locus dimension was the most powerful predictor of affects for both groups, as found in intra- and inter-personal studies (e.g., Russell & McAuley, 1986; Weiner et al., 1978, 1979). Globality attributions, which have only recently received attention in research on close relationships and which do not feature in Weiner's multidimensional model, were also found to be significant predictors of affect, and had more impact than stability and controllability. This suggests that globality as a causal dimension has an impact on any relationship which involves interaction over time and across situations. In Weiner's hypothesis, when personal failure is due to causes perceived as controllable by others, this should elicit anger. Although in the achievement context this has been viewed as extremely important, this research failed to demonstrate any clear linkage between controllability (by others) and anger (see Russell & McAuley, 1986). It is possible that this dimension may work differently in intergroup conflict and conflict resolution (Hewstone, 1988).

In addition, no support was found in this research for the distinction between outcome-dependent and attribution-dependent affects, as proposed by Weiner. There was no tendency for causal dimensions to be more significant mediators of happiness and disappointment, rather than pride and anger. Similar findings have been reported by McFarland & Ross (1982) in an interpersonal achievement setting. One very interesting finding uncovered in this research is that causal dimensions were predictors of both positive and negative affects, but primarily for outcomes associated with an ingroup, not outgroup, actor. This finding is consistent with recent extensions of social identity research known as "self-categorization theory" (Turner et al., 1987). This theory suggests that

'identification' and 'internalization' of a social categorization occurs through the cognitive process of self-categorization. This self-categorization systematically biases human behaviour in a group to represent it as more closely in accordance with stereotypic ingroup characteristics and norms. Thus, as far as group behaviour is concerned, people's main psychological focus is ingroup formation, self-categorization and group action which are obviously mediated through affective, cognitive and motivational experiences primarily related to the ingroup.

Tajfel (1969) proposed that a perceiver's system of causes must provide, as far as possible, a positive self-image. Thus the most obvious motivational basis for intergroup attributions is the desire to view one's own group positively, thus achieving, maintaining or defending one's self-esteem. From this perspective, group members may use their attributions to achieve or enhance a positive social identity (e.g., by attributing positive ingroup, or negative outgroup, acts to causes that are internal, stable, uncontrollable by others and global), or to protect that identity (e.g., by attributing negative ingroup, or positive outgroup, acts to causes that are external, unstable, controllable by others and specific). However, as mentioned in Chapter 2, a functional relationship between desire for achieving positive self-esteem and enhanced intergroup discrimination has not yet been convincingly demonstrated. In line with the theory, this research suggests that if group membership is salient, people may use their attributions to enhance a positive self-esteem, hence social identity. Although studies related to self-esteem and intergroup discrimination suggest that locus of ingroup favouritism is mainly a function of enhancement of the ingroup, this research suggests that a positive group image can be achieved via both ingroup favouritism and/or outgroup derogation (see Brewer, 1979).

Taken together, the empirical research reported in this thesis served four broad theoretical purposes. Firstly, this research testified to the extent that real-life studies correspond with the theoretical developments achieved through laboratory based research. Secondly, this research verified some major hypotheses derived from interpersonal level research to intergroup level. Thirdly, this added depth and richness in order to understand three main intergroup domains: intergroup contact, crossed-categorization and intergroup attribution with relation to the majority-minority context. Finally, this research instigated several interesting issues which may possibly guide the direction of future theoretical developments in social cognition and intergroup relations.

### 6.3 Use of a Variety of Dependent Measures to Assess Target Group Evaluation and Perceived Variability.

In this series of studies, different dependent measures were used to measure target group discrimination as a function of the religious group of subjects. In the 'intergroup contact' study, a single measure was used to assess an overall attitude towards the outgroup. A pilot study on the same populations had shown this single-item criterion to be no less effective or reliable than multi-item measures, and simpler to administer. In the 'crossed-categorization' studies, trait ratings were used that were non-stereotypically related to either religious group. One of the secondary aims of using these multiple non-stereotypically related traits was to compare the rating pattern with the single-item overall attitude measure used in the previous study. In both studies, the pattern was found to be very similar, that is, the minority group (Bangladeshi Hindus) showed relatively greater bias then the comparable majority group (Bangladeshi Muslims). Thus, the single-item measure reliably assessed target group discrimination.

In the 'intergroup attribution' studies, contrary to previous findings, Muslims showed a consistent attributional bias. Although Hindus showed a robust intergroup discrimination, as measured by adjective ratings in one of the studies, overall their ratings on attribution dimensions were relatively unbiased. This whole pattern is quite inconsistent with previous findings reported in 'intergroup contact' and 'crossed-categorization' studies. It may be that the attributional dimension ratings are much more specific in nature and failed to elicit overall (central tendency) group judgements. It is also true that attributional judgements are subject to more complex cognitive bias where different stages of cognitive process are involved. For example, Gilbert, Pelham, & Krull (1988) suggest three distinct stages: categorization, characterization, and correction. Therefore, more time should be required in the case of attributional judgements than for the adjective ratings, and it is easier for a threatened minority group to mask their true explanatory judgement for a dominating majority group. Perhaps because of the differing cognitive processes involved, recent studies suggest that different dependent measures like adjectives, attitudes and attributional dimensions may not coincide precisely. For example, in a recent study Lynskey, Ward and Fletcher (1991) found no link between stereotypes and attribution ratings.

Perceived variability is receiving attention in research on social cognition and intergroup relations (e.g., Linville et al., 1986; Park & Judd, 1990; Park, Judd & Ryan, 1991). A number of hypotheses have been tested regarding perceived variability relating to intergroup contact and crossed-categorization in this series of studies. Currently ten measures of perceived variability have been identified and different measures tap different constructs. Therefore, results may vary according to the specific procedure used (Park & Judd, 1990). In the 'intergroup contact' study, both range and similarity measures were used. Although the first

is intended to measure dimensional variability and the second, general variability, results correlated quite reliably ($r(113) = -.43, p < .001$).

In the first study on 'crossed-categorization', both Linville et al.'s (1986) distribution task and similarity measure were used. The distribution task is supposed to provide two inter-correlated scores: probability of differentiation (Pd) and standard deviation (SD). Although these two scores were found to be significantly correlated, they did not offer comparable findings. Pd in fact failed to provide any differential information as a function of religious and national group categorization. Conversely SD offered clear differentiated variability information according to different target groups. In addition, it was found that the similarity score was uncorrelated with the Pd score, but significantly correlated with SD. Simon and Pettigrew (1990) suggested that the pattern of means should be similar and they used only Pd as the dependent measure. It is unclear why the Pd measure failed to reveal any differences in perceived variability in present research. Linville et. al. (1986) suggested that Pd reflects subjects' stereotypic thinking. It may be, then, that the stereotypically irrelevant traits used in this study had an influence on probability of differentiation judgements. Recently Johnston (1991) reported that Pd was a less effective measure of perceived variability in a series of laboratory experiments. Because of these results, in the second study on 'crossed-categorization' only the range measure was used. In both studies, it was confirmed that perceived variability is not a mediating factor of target group evaluation in crossed-categorization situations. Furthermore, both studies supported the fact that the minority group tend to perceive themselves as less variable than the majority group. This conclusion fits nicely with several other studies relating to numeric status, social identity and perceived group variability (see Simon & Brown, 1987; Simon, in press).

Overall the employment of different dependent measures has provided interesting insights into the investigation of real-life intergroup relations. Wyer and Srull (1988) highlighted the need for establishing theoretical conclusions by use of several different procedures, thereby reducing the danger that these conclusions are specific to a given set of techniques. The fact that the different measures all appear to fit together quite well lends confidence to the findings. However, measures which do not appear compatible urge future research.

## 6.4 Limitations.

The reported series of studies has provided insights regarding recent developments in the contact hypothesis, crossed-categorization and intergroup attribution in a real-life setting. Many laboratory-oriented findings have been replicated in this research, and it has offered new clarifications and extended directions for future research. However, the studies are not without limitations. A number of shortcomings in individual studies have been discussed above. In this section these are discussed more elaborately with due importance being given to the main overall limitations of the whole series of studies.

The most obvious limitation with this research is that it was carried out in field settings as quasi-experiments. Thus, internal validity, but not external validity, may be problem here. There are several advantages of carrying out studies in real-life situations (see Manstead & Semin, 1988). For example, laboratory experiments do simulate real-life contact but in a very reduced way such that the impact of other real-life variables may be unidentified. Besides, in real-life settings motivational and affective factors play a vital role which in many cases laboratory experiments unable to induce properly. Investigations related to social cognition and intergroup relations (e.g., attitudes, stereotypes, perceived variability measurements) within a laboratory setting may be subject to

experimenter effects (e.g., Rosenthal, 1966), to social desirability and to demand characteristics (e.g., Orne, 1969). Further, the external validity tends to be relatively low and therefore generalizability of observed relationships beyond the specific circumstances to real-life can be difficult (e.g., Gergen, 1978). Real-life studies mostly have these advantages over laboratory experiments. Real-life studies do, however, have a number of drawbacks. They do not allow much direct control, and hence lack of manipulation is one of the major problems in a real-life setting. The nature of the contact, the type and number of group members met and the information received can all be controlled in the laboratory but not so much in real-life settings. The most crucial limitation of field settings is that they do not allow for tests of causal links and mediational roles of variables. Therefore, both laboratory experiments and studies in real-life settings are complementary to each other.

As mentioned, in a realistic study causal links between variables are difficult to establish. This problem is well reflected in the 'intergroup contact' research. Many major problems such as whether perceived variability leads to attitude change or attitude change leads to perceived variability have to remain unanswered in this research. The only way to resolve this problem is to carry out laboratory experiments based on the main findings obtained in this research. Perceived typicality has been found to be an influential factor in intergroup anxiety and also in perceived variability, however, this research does not offer any ready made information about how this typicality is viewed and interpreted by different respondent groups. Typicality appears to be an important mediator for both affective and cognitive consequences of intergroup contact, but the exact process involved is unclear. The study on 'intergroup contact' has, then, identified many cognitive-affective outcomes of intergroup contact but few of the underlying processes.

One limitation of the reported studies is that, although proper importance was given to one of the recent social cognitive processes, namely "perceived group variability", only three techniques of measurement were employed. Also taxonomic variability was not included in any of the studies. In the 'intergroup contact' study, while affective and cognitive factors were considered, motivational factors related to intergroup contact were largely excluded. While the first study on 'crossed-categorization' confirmed a robust dominance of religious categorization, the second study might have excluded religious categorization and could more sensibly have concentrated upon the importance of national and linguistic categorization. Thus, elimination of the most dominant categorization could have provided an analysis of the relative importance of national and linguistic identity for a majority and minority group. It might also be argued that the experimental design in the second study on 'crossed-categorization' was rather weak, as three categorization dimensions (religious, national and linguistic) did not allow for the creation of a 2 x 2 x 2 completely orthogonal factorial design. This non-orthogonality largely precludes the legitimacy of claiming any interaction effects. In defence of what was done, however, religion is clearly the most important social categorization in Bangladesh, and therefore in Study 4.2 this dimension was used as the frame of reference. Similarly, in defence of the non-orthogonal design, it can be clarified that for Bangladeshi Hindu and Muslim subjects, a condition in which religion is the same or differs, country is the same, but language differs, does not exist.

Two of the studies on 'intergroup attribution', although attempting to solve previous methodological problems, failed to obtain any information regarding the extent to which the cause was thought to be controllable by the actor himself. Notwithstanding, there were valid grounds for using the concept of 'controllability by others' in this research, because this dimension is supposing

related to one of the affects studied (anger). One important concern with these studies is the absence in study 5.2 of the balanced design of study 5.1, with respect to full crossing of type of target group and group membership of subject. Thus, the attributional evaluation pattern by the Hindu minority group in crossed-categorization was not provided. Having complementary data from subjects in both groups would have been more useful for this majority-minority intergroup context. Similarly, study 5.3 is also a "half-design" which prevents testing whether the attributional bias in study 5.1 by the Muslim majority group had shown a ceiling effect. More specifically, this "half-design" meant it was not possible to explore whether the increased salience purported to result from the sequence of adjective-attribution presentation could increase the already strong effects observed among the majority. Another shortcoming with Study 5.3 was the lack of any manipulation check, which could reliably provide information regarding whether the sequence manipulation had produced increased group salience and affected attributional evaluation in the way it was assumed. Finally, in both Study 5.1 and 5.2, causal dimensions and affective reactions, the two sets of dependent measures were presented in a fixed-order. Although one obvious argument for this fixed order presentation could be that the attribution elicits affects, to investigate to what extent this was true, a counterbalanced presentation of two sets of dependent variables would need to be employed.

The reported series of studies has increased understanding of the cognitive, motivational and affective processes involved in real-life intergroup relations in a majority-minority context but, as the limitations outlined above indicate, further research is needed to extend further these findings and their generalizability.

## 6.5 Potential Future Research.

Looking back on the empirical work reported in this thesis it is felt that despite all the shortcomings listed above, the research conducted within the real-life context offers some potentially fruitful and promising directions for the investigation of psychological processes involved in intergroup contact, crossed-categorization and intergroup attribution. Some major limitations of the reported studies were identified and a number of specific suggestions for future studies have been outlined above. In this section these are highlighted with reference to some new recommendations.

One major limitation of this series of studies was that these were non-laboratory based and were therefore unable to provide any causal interpretation among variables. Future research must aim to extend the present findings involving controlled experimental conditions. For example, in an intergroup context, both positive and negative characteristics of typical outgroup member should be manipulated so that differential effects can be clearly identified. Similarly, mediating factors for intergroup anxiety should be identified in a more controlled manner and causal relations among variables like intergroup anxiety, perceived variability and attitudes towards outgroup should be established. Both laboratory and field-study methodologies have advantages in identifying crucial factors for stereotypes and attitude change through intergroup contact. What is proposed here is a combination of the two methodologies as the next step forward for social cognition and intergroup relations research.

The 'intergroup contact' study revealed that greater familiarity (contact) with an outgroup increases the perceived variability of that outgroup. However, this significant finding was obtained using one type of measure of variability (the perceived dispersion of group members about their central tendency). Future research might try to replicate this finding using other types of measure, for

example the extent to which dimensional attributes are perceived to covary (taxonomic variability; Quattrone, 1986) and perceptions of the extent to which members of the group fit the group stereotype (Park & Judd, 1990). This research did not relate social identification and self-esteem to affective, cognitive and behavioural outcomes of intergroup contact. These could be promising topics for future research.

This research has failed to establish any support for Tajfel's (1982) proposed mediating role of perceived homogeneity/hetreogeneity in reducing intergroup discrimination in crossed-categorization settings. Again this was tested using one type of variability measure (the perceived dispersion of group members about their central tendency). Interestingly, Quattrone (1986) suggested that in terms of taxonomic variability in perceiving an outgroup people primarily attend to a superordinate out-group category, but in case of ingroups both superordinate and subordinate classifications are attended to. Quattrone assumes that as a consequence of this differing attentional process, one misses the opportunity of divergent perceptions of variability of an outgroup. Future research should look into the matter, focussing on taxonomic variability in crossed-categorization conditions. Many other assumptions have been proposed to relate absence/reduction of intergroup discrimination in crossed-categorization situations, such as decreased category salience, eliminated perceptual boundary, enhanced perceived similarity, awareness of common membership etc. The present research tried to relate a cognitive process/outcome to crossed-categorization phenomena. Another promising issue could be whether people's affective reactions differ in dichotomous and overlapped target group evaluations.

Intergroup attributions, a crucial component in intergroup relations, still seem to be in need of a more profound theoretical, empirical and methodological

basis. There are several issues this research did not manage to address. For example, in an intergroup context, how are causal attributions, and causal dimensions related to each other and which of these has a greater influence on affective reactions. At an interpersonal level, Weiner et. al. (1979) suggest that individuals first arrive at a causal attribution and this attribution then elicits certain affective reactions to the outcome. It is important to know whether affects follow the classifications of attribution in terms of causal dimensions or vice versa. Further research is needed that uses information processing methodologies in an intergroup context to investigate how people reach causal dimensions, from expressions of causal attributions, and finally respond affectively to positive and negative outcomes of ingroup and outgroup actors. This research found a link between attribution dimensions and affective reactions only in the explanation of ingroup actors' behaviour. Laboratory based controlled experiments involving reaction-time analysis for causal processing and affective reaction for both in- and outgroup may offer some additional information for this differing pattern.

Although this research has addressed many issues, such as those raised by Hewstone (1990), it failed to address some important features of intergroup attribution research. For example, the relationship between social identification and intergroup attribution still needs to be studied. Similarly, Hewstone has suggested that research should include a noncategorization condition that would be useful for sorting ingroup favouritism from outgroup derogation.

Multidimensional ratings for causality used in this research have been adapted from interpersonal achievement research. Research in the intergroup context suggests that 'controllability' may have a different meaning according to its context. At an intergroup level, where many members are involved over time, some additional dimensions may prove useful. For example, a dimension which

assesses whether the cause is something that is generalizable for many other members of the group or only applicable to that specific actor presented in the event may provide a more complete picture in an intergroup context.

Current research on social cognition and intergroup relations seeks to relate different aspects of intergroup relations, such as intergroup contact and intergroup attribution, in order to gain a better understanding of the global context. Kelley (1967) in his classic writing proposed that the frequency effect for outgroup contact may be a crucial variable in inferring the properties of an entity. The greater sample a person has of a outgroup behaviour, the more confident he/she should be in explaining situational information related to that outgroup. Thus, intergroup contact, perceived variability and intergroup attribution could all have links and provide a global picture of intergroup relations.

To conclude, it can be said that this research identified cognitive and affective consequences of intergroup contact but different processes involved in different circumstances still need to be explored. Similarly, an attempt to test the possibility of reducing intergroup discrimination by crossing different categorization dimensions proved to be mostly unsuccessful because of the dominance of superordinate categorization dimensions in people's social-cognitive world. Thus, other hypotheses which may be related to this issue need to be carefully tested. This research replicated the fact that ethnocentric attributional bias may not be generalizable across societies. The numeric and socio-political status of a group plays a crucial determining role for attributional bias. Therefore, future intergroup attribution research should investigate the interaction of both societal and individual processes. Our present knowledge regarding the processes of intergroup relations is mostly fragmented and a larger part of this domain is still uncovered. Thus, a massive effort is needed in order to

achieve an integrated knowledge structure for better understanding the most complex human interaction process - intergroup relations.

Note.

1. One crucial problem that can be noted with Branthwaite et al.'s (1979) study is that status manipulation checks were not successful. Vleeming's (1983) study did not in fact, look at numerical group status differences properly. He found rather that an experimentally manipulated underprivileged group showed greater ingroup favouritism and hostility than did a privileged group.

# CHAPTER 7

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# APPENDICES.

# APPENDIX A

## INTERGROUP CONTACT STUDY

### (Questionnaire for Muslim Subjects)

Hindus and Muslims are the two main religious communities in our country. People have different contact experiences with these two communities in our society. In this questionnaire we want to find out what is your personal experience in terms of everyday contact with Hindus and what you personally think about the Hindus. Please answer all questions with reference to the typical everyday contact situations, as you experienced it. This is not a test, there are no right or wrong answers. All we want to do is find out your personal experiences.

Please answer all the questions honestly so that we really know what is your real experience or opinion. It is important that you answer every question. All of your replies will be confidential and we will not ask for your name, so you will remain anonymous.

In using the 7 point scales that follow: your view will be indicated by where you place a CROSS (X) on the scale. For example, if we asked how warm it was today, and you thought it was very warm, then you would place your X as follows:

```
                                                                X
1--------2--------3--------4--------5--------6---------7
very                                                        very
cold                                                        warm
```

If you thought it was actually rather cold, than you would place your X nearer the other end of the scale. Place a X in the centre if you are really undecided.

Please work through the questionnaire in the order shown, do not look ahead to see what questions come next. Thank you, in advance, for your help.

---

### SECTION - 1

1. Please tell us how much contact you had in the past or do you now have with Hindus?

(a) At college or university?

```
1--------2--------3--------4--------5--------6---------7
none                                                        a great
at all                                                      deal
```

(b) As neighbours?

```
1--------2--------3--------4--------5--------6---------7
none                                                        a great
at all                                                      deal
```

(c) As close friends?

1--------2--------3--------4--------5--------6--------7
none at all — a great deal

2. Please tell us how many informal talks you are having in everyday life in general with your Hindu classmates, neighbours, friends and other people?

1--------2--------3--------4--------5--------6--------7
not at all — very often

3. Please tell us how often have you visited the home of a Hindu family?

1--------2--------3--------4--------5--------6--------7
never — very often

4. When you come into contact with Hindus do you work together as equal?

1--------2--------3--------4--------5--------6--------7
definitely no — definitely yes

5. Is the contact you have had in the recent past or you are having now with Hindus in general voluntary or involuntary?

1--------2--------3--------4--------5--------6--------7
definitely involuntary — definitely voluntary

6. Is the contact you have had in the recent past or are having now with Hindus in general intimate or superficial?

1--------2--------3--------4--------5--------6--------7
very superficial — very intimate

7. Please tell us is your contact experience with Hindus pleasant and enjoyable?

1--------2--------3--------4--------5--------6--------7
not at all — very much

8. Does the contact you have had in the recent past or are having now with Hindus in general take place on a cooperative or competitive basis.

1--------2--------3--------4--------5--------6--------7
very competitive — very cooperative

9. When you come into contact with Hindus in daily life, how many people are usually present there? (Please select ONE)

(A) A single Hindu and me;

(B) Several Hindus and me as a sole Muslim;

(C) A single Hindu and several Muslims;

(D) Several Muslims and several Hindus.

10. When you came into contact with Hindus, in general do you feel the you met as mere individuals or as members of your respective religious group (i.e., as Hindu and Muslim)?

1-------2-------3-------4-------5-------6-------7
as individual — as group member

11. To what extent did you see Hindus with whom you had contact experience as typical Hindus?

1-------2-------3-------4-------5-------6-------7
not at all typical — very much typical

12. When you come into contact with Hindus are you aware of similarities between them and you (as Hindu and Muslim)?

1-------2-------3-------4-------5-------6-------7
not at all — very much

13. When you come into contact with Hindus do you feel awareness of differences between them and you (as Hindu and Muslim)?

1-------2-------3-------4-------5-------6-------7
not at all — very much

14. Overall, what is your attitude towards Hindus in our society?

The following possible responses are presented. Place a **X** on appropriate number on the scale:

1 Strongly **negative;**
2 Moderately **negative;**
3 Slightly **negative;**
4 **Neutral** or undecided;
5 Slightly **positive**
6 Moderately **positive**
7 Strongly **positive**

1-------2-------3-------4-------5-------6-------7
strongly negative — strongly positive

## SECTION - 2

In this section please indicate on each of the scales below where you think the Hindus in our society, <u>on average</u>, fall. Please do this by **CIRCLING** the appropriate number on each scale.

Once you have done this we would like you also to indicate, on the same scales, where the most extreme members of the Hindus in our society would fall. That is, where would the highest and the lowest scorer on each trait be. Please indicate this by putting a **CROSS** through the members corresponding to where the most extreme members of the Hindus in our society would fall.

*For example*:

FUN LOVING

1--------2--------3--------4--------5--------6--------7
not at all extremely

In this case I thought 3 represented the average level of fun lovingness of the Hindus in our society with the lowest extreme group member scoring 2 and the highest 6.

HOSPITABLE

1--------2--------3--------4--------5--------6--------7
not at all extremely

SELFISH

1--------2--------3--------4--------5--------6--------7
not at all extremely

COOL-HEADED

1--------2--------3--------4--------5--------6--------7
not at all extremely

CONSERVATIVE

1--------2--------3--------4--------5--------6--------7
not at all extremely

PATRIOTIC

1--------2--------3--------4--------5--------6--------7
not at all extremely

DECEITFUL

1--------2--------3--------4--------5--------6--------7
not at all extremely

INTELLIGENT

1--------2--------3--------4--------5--------6--------7
not at all extremely

AGGRESSIVE

1--------2--------3--------4--------5--------6--------7
not at all extremely

Finally, please tell us in general, do you think that Hindus are different from one another or you think they are alike to each other?

1--------2--------3--------4--------5--------6--------7
completely different from one another — pretty much alike

**SECTION - 3**

Now please tell us in relation to the following scales if you were the only member of your religious group and you were interacting with Hindus (e.g. talking with Hindus, working on a project with Hindus, traveling with Hindus), how would you feel compared to occasions when you are interacting with Muslims?

**Awkward:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Self-conscious:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Happy:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Accepted:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Confident:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Irritated:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Impatient:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Defensive:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Suspicious:**

1--------2--------3--------4--------5--------6--------7
not at all very much

**Careful:**

1--------2--------3--------4--------5--------6--------7
not at all very much

## SECTION 4

Finally, would you please fill in some personal details about yourself. We would like to assure that you these will not make you identifiable to us. But thay will help us to arrange the data systematically. We are not at all interested in knowing your name. Thank you very much again.

1. What sex are you? ( M/F ) _____

2. Are you a Hindu or Muslim ( H/M ) _____

3. How old are you? ( in years ) _____

# APPENDIX B

## CROSSED-CATEGORIZATION STUDIES

## STUDY 4.1

### ( Target group: Bangladeshi Hindu)

In this questionnaire we would like to ask for your opinion towards Hindus in Bangladesh. People usually evaluate different groups in different ways, and that is our interest in this research. This is not a test, there are no right or wrong answers. All we want to do is find out your personal opinion.

It is important that you answer every question. All of your replies will be confidential and we will not ask for your name, so you will remain anonymous.

In using the 7 point scales that follow: your view will be indicated by where you place a CROSS (**X**) on the scale. For example, if we asked how warm it was today, and you thought it was very warm, then you would place your **X** as follows:

```
                                                          X
1--------2--------3--------4--------5---------6---------7
very                                                  very
cold                                                  warm
```

If you thought it was actually rather cold, than you would place your **X** nearer the other end of the scale. Place a **X** in the centre if you are really undecided.

In this questionnaire we have included some questions about how you personally view a religious group living in a certain country. For example, how characteristic do you think the trait "friendly" is for Hindus in Bangladesh in general? The more you think the trait is characteristic for them the higher the number you should cross, and conversely, the more you think that the trait is not characteristic to them, the lower the number you should cross.

Please work through the questionnaire in the order shown, do not look ahead to see what questions come next. Thank you, in advance, for your help.

### SECTION - I

All questions in this section are concerned with the **Hindus in Bangladesh.** Please indicate how characteristic each of the following five traits is for **Hindus in Bangladesh** in general. Place a **X** on the appropriate number on the scales below.

**Aggressive**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

**Patriotic**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

**Dominating**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

**Hospitable**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

**Selfish**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

## SECTION - II

Now please read these instructions very carefully. For each of the traits listed below, your first task is to consider 100 randomly selected **Hindus in Bangladesh** in your mind. Then please indicate their distribution in your opinion, on each of the levels below by placing a number in each of the boxes specifying how many of the 100 group members you would expect to be at each position on the level or dimension. At the end of each level please ensure that your distribution does add up to 100.

*For example*:

**Friendly**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 15 | 20 | 40 | 20 | 2 | CHECK = 100 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| not at all applicable | | | | | | | very much applicable | |

**Aggressive**

_____ _____ _____ _____ _____ _____ _____ _____ CHECK = 100

1 2 3 4 5 6 7 8

not at all applicable — very much applicable

**Patriotic**

_____ _____ _____ _____ _____ _____ _____ _____ CHECK = 100

1 2 3 4 5 6 7 8

not at all applicable — very much applicable

**Dominating**

_____ _____ _____ _____ _____ _____ _____ _____ CHECK = 100

1 2 3 4 5 6 7 8

not at all applicable — very much applicable

**Hospitable**

_____ _____ _____ _____ _____ _____ _____ _____ CHECK = 100

1 2 3 4 5 6 7 8

not at all applicable — very much applicable

**Selfish**

_____ _____ _____ _____ _____ _____ _____ _____ CHECK = 100

1 2 3 4 5 6 7 8

not at all applicable — very much applicable

Finally, please tell us in general, do you think that **Hindus in Bangladesh** are different from one another or you think they are alike to each other?

1--------2--------3--------4--------5--------6--------7

completely different from one another — pretty much alike

## SECTION III

Finally, would you please fill in some personal details about yourself. We would like to assure you that these will not make you identifiable to us. But they will help us to arrange the data systematically. Thanks very much again for your help in this research.

1. What sex are you? ( M/F ) _____

2. Are you a Hindu or Muslim ( H/M ) _____

3. How old are you? ( in years ) _____

---

## STUDY 4.2

(Target group: Bengali Hindus in Bangladesh)

In this questionnaire we would like to ask for your opinion towards Bengali Hindus in Bangladesh. People usually evaluate different groups in different ways, and that is our interest in this research. This is not a test, there are no right or wrong answers. All we want to do is find out your personal opinion.

It is important that you answer every question. All of your replies will be confidential and we will not ask for your name, so you will remain anonymous.

In using the 7 point scales that follow: your view will be indicated by where you place a CROSS (**X**) on the scale. For example, if we asked how warm it was today, and you thought it was very warm, then you would place your **X** as follows:

```
                                                    X
1--------2--------3--------4--------5--------6---------7
very                                                very
cold                                                warm
```

If you thought it was actually rather cold, than you would place your **X** nearer the other end of the scale. Place a **X** in the centre if you are really undecided.

In this questionnaire we have included some questions about how you personally view a religious group living in a certain country and speaking a particular language. For example, how characteristic do you think the trait "friendly" is for Bengali Hindus in Bangladesh in general? The more you think the trait is characteristic for them, the higher the number you should cross. Conversely, the more you think that the trait is not characteristic to them the lower the number you should cross.

Please work through the questionnaire in the order shown, do not look ahead to see what questions come next. Thank you, in advance, for your help.

## SECTION I

All questions of this section are concerned with the **Bengali Hindus in Bangladesh.** Please indicate how characteristic each of the following twelve traits is for **Bengali Hindus in Bangladesh** in general. Place a **X** on the appropriate number on the scales below.

**Honest**

1--------2--------3--------4--------5--------6--------7
not at all characteristic — very characteristic

**Aggressive**

1--------2--------3--------4--------5--------6--------7
not at all characteristic — very characteristic

**Patriotic**

1--------2--------3--------4--------5--------6--------7
not at all characteristic — very characteristic

**Dominating**

1--------2--------3--------4--------5--------6--------7
not at all characteristic — very characteristic

**Hospitable**

1--------2--------3--------4--------5--------6--------7
not at all characteristic — very characteristic

**Selfish**

1--------2--------3--------4--------5--------6--------7
not at all characteristic — very characteristic

**Cool-headed**

1--------2--------3--------4--------5--------6--------7
not at all characteristic — very characteristic

**Conservative**

1--------2--------3--------4--------5--------6--------7
not at all characteristic — very characteristic

**Intelligent**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

**Opportunist**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

**Broad-minded**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

**Disruptive**

1--------2--------3--------4--------5--------6--------7
not at all very
characteristic characteristic

## SECTION II

Thank you very much for giving your responses in the previous section of this questionnaire. Now please tell us how you feel *at the moment* in respect of the following scales:

*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
pleasant unpleasant

*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
cold warm

*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
self-assured hesitant

*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
inefficient efficient

*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
fair unfair

*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
bad good

*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
friendly unfriendly

*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
lazy hardworking

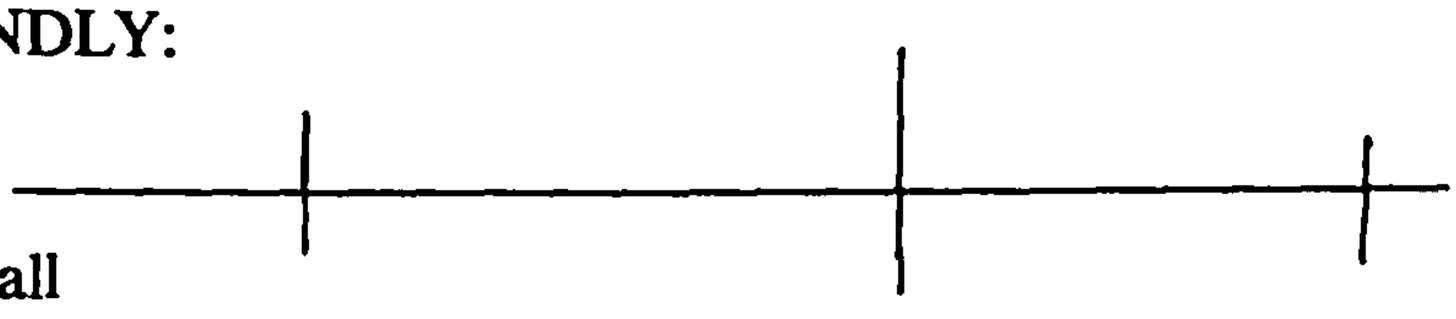
*I feel at the moment:*

1--------2--------3--------4--------5--------6--------7
very very
close distant

## SECTION III

The following is concerned with your perceptions of the characteristics of Bengali Hindus in Bangladesh. In this section, you will see twelve characteristics each with a line. We would like you to make three slashes on each line for each of the characteristics. Here is an example:

FRIENDLY:



not at all extremely

First, for each scale, make one slash where you feel, on average, the group falls on that characteristic. For instance, this person thought that, on average, the average Bengali Hindus in Bangladesh were somewhat friendly (about the middle of the scale). Then, mark another, shorter, slash where you feel the most friendly person from that particular group (Bengali Hindus in Bangladesh) is, and then a third (also shorter) slash where you feel the least friendly person on that characteristic is. For instance, on this scale, the most friendly Bengali Hindu in Bangladesh is rated as being extremely friendly, whereas the least friendly Bengali Hindu in Bangladesh is rated as being not very friendly. Then repeat these judgements for each of the characteristics.

It is, of course, clear that it may sometime be difficult to arrive at a precise judgement. In cases of doubt please enter your best guess.

Please fill out all of the judgements completely (three for each characteristic), because this is important for proper analysis of the results. Please note that there are no right or wrong answers to these questions.

**HONEST:**

_____

not at all extremely

**AGGRESSIVE:**

_____

not at all extremely

**PATRIOTIC:**

_____

not at all extremely

**DOMINATING:**

_____

not at all extremely

**HOSPITABLE:**

_____

not at all extremely

**SELFISH:**

_____

not at all extremely

**COOL-HEADED:**

_____

not at all extremely

**CONSERVATIVE:**

_____

not at all extremely

**INTELLIGENT:**

_____

not at all extremely

**OPPORTUNIST:**

not at all _____ extremely

**BROAD-MINDED:**

not at all _____ extremely

**DISRUPTIVE:**

not at all _____ extremely

## SECTION IV

We are all members of different social groups or social categories. Some of such social groups or categories pertain to gender, race, religion, nationality, ethnicity and socio-economic class. We would like you to consider your membership in your religious group or category, and respond to the following statements on the basis of how you feel about that (religious) group and your membership. There are no right or wrong answers to any of these statements. We are interested in your honest reactions and opinions. Please read each statement carefully, and respond by using the following seven point scale:

1 Strongly Disagree
2 Disagree
3 Disagree Somewhat
4 Neutral
5 Agree Somewhat
6 Agree
7 Strongly Agree

_____ A. I am a worthy member of the religious group to which I belong.

_____ B. I often regret that I belong to the religious group I do.

_____ C. Overall, my religious group is considered good by others.

_____ D. Overall, my religious group membership has very little to do with how I feel about myself.

_____ E. I feel I don't have much to offer to the religious group to which I belong.

_____ F. In general, I am glad to be a member of the religious group to which I belong.

_____ G. Most people consider my religious group, on the average, to be more ineffective than other religious groups.

_____ H. The religious group I belong to is an important reflection of who I am.

_____ I. I am a cooperative participant in the religious group to which I belong.

_____ J. Overall, I often feel that the religious group of which I am a member is not worthwhile.

_____ K. In general, others respect the religious group that I am a member of.

_____ L. The religious group I belong to is unimportant to my sense of what kind of a person I am.

_____ M. I often feel I am a useless member of my religious group.

_____ N. I feel good about the religious group to which I belong.

_____ O. In general, others think that the religious group I am a member of is unworthy.

_____ P. In general, belonging to a religious group is an important part of my self-image.

## SECTION V

Finally, would you please fill in some personal details about yourself. We would like to assure you that these will not make you identifiable to us. But they will help us to arrange the data systematically. Thanks very much again for your help in this research.

1. What sex are you? ( M/F ) _____

2. Are you a Hindu or Muslim ( H/M ) _____

3. How old are you? (in years) _____

# APPENDIX C

## INTERGROUP ATTRIBUTION STUDY

## (STUDY: 5.1)

In this questionnaire we are interested in how people explain various everyday events. On the following pages you will read short paragraphs describing the behaviour of an actor in a particular situation. Please imagine that the actor in the story was directing his behaviour towards you. This behaviour can be either positive or negative. There are three situations:

(a) a householder who either sheltered or refused shelter to you, as you were caught in the rain;

(b) a passer-by who either helped or ignored you after you had fallen off your bicycle;

(c) a shopkeeper who was either generous to or cheated you.

Although you are not presented with very much information, we would like you to write a very brief explanation for each behaviour of the specified actor in the story. Please read the paragraphs at the top of each page and then write the most important explanation that comes to your mind.

In addition to that, you will be asked to rate **your explanations** on the four scales provided. Each rating scale refers to a dimension underlying how people explain events:

(a) internal-external: the extent to which the cause reflects something about the actor (7) vs something external to the actor (1);

(b) stable-unstable: whether the cause is something stable/unchangeable (7) or unstable/changeable (1) over time;

(c) controllable-uncontrollable by others: whether the cause is under the control of others (7) or not controllable by others (1); and

(d) global-specific: whether the cause is something that reflects the actor's behaviour in other situations too (7) or only reflects the particular behaviour of the actor in question (1).

We recognize that these judgements will sometimes be quite difficult, but please make the best response you can. We would like you to work through all 12 paragraphs and give a fairly quick answer. It is very important that you answer all the questions, and don't leave any ratings blank. For each paragraph you will also be asked to indicate how strongly you feel each of these four emotions: happiness, anger, pride and disappointment.

Please note this is not a test; and there are no right or wrong answers. It is your own opinions that are of interest. We would like to assure you that we will not ask for your name, thus all your replies will be anonymous.

In using the 7 point scales that follow: your view will be indicated by where you place a CROSS (X) on the scale. For example, if we asked how warm it was today, and you thought it was very warm, then you would place your X as follows:

```
                                                                X
1--------2--------3--------4--------5--------6--------7

Very                                                        very
cold                                                        warm
```

If you thought it was actually rather cold, then you would place your X nearer the other end of the scale. Place a X in the centre if you are really undecided.

Thank you, in advance, for your help.

(Paragraph: 1)

Imagine that you are walking one day. It unexpectedly begins to rain very heavily. A MUSLIM householder does not offer to shelter you from the rain.

Why do you think the MUSLIM householder did not offer to shelter you? Please write the one most important cause that comes to your mind.

.....

Now, please think about the cause you have just written above. The following first four ratings concern your impressions or opinions of this cause. To indicate your impression place a X on the appropriate number for each of the following scales.

```
1--------2--------3--------4--------5--------6--------7
Is the cause                                        Is the cause
something that:                                     something that:
reflects an aspect                                  reflects an aspect
of the situation/                                   of the actor's
something about                                     internal
other people                                        characteristics
```

```
1--------2--------3--------4--------5--------6--------7
Is the cause                                        Is the cause
something that is:                                  something that is:
temporary                                           permanent
```

```
1--------2--------3--------4--------5--------6--------7
Is the cause                                        Is the cause
something that is:                                  something that is:
uncontrollable                                      controllable
by other people                                     by other people
```

1--------2--------3--------4--------5--------6--------7
Is the cause something that: reflects only the actor's behaviour in question

Is the cause something that: reflects actor's behaviour in other situations as well

Now please rate how strongly do you feel the following emotions with regard to the situation described in the paragraph.

1--------2--------3--------4--------5--------6--------7
Not at all angry

Very angry

1--------2--------3--------4--------5--------6--------7
Not at all happy

Very happy

1--------2--------3--------4--------5--------6--------7
Not at all disappointed

Very disappointed

1--------2--------3--------4--------5--------6--------7
Not at all proud

Very proud

(Paragraph: 2)

Imagine that you have a bad fall off your bicycle while cycling through town. A HINDU passer-by ignores you.

Why do you think the HINDU passer-by ignored you? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 3)

Imagine that you are out walking one day and it unexpectedly begins to rain very heavily. A MUSLIM householder offers to shelter you from the rain.

Why do you think the MUSLIM householder offered to shelter you? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 4)

Imagine that you have a bad fall off your bicycle while cycling through town. A HINDU man passing by comes over to offer some help.

Why do you think the HINDU passer-by stopped to help? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 5)

Imagine that you are buying fruit in the market and a MUSLIM shopkeeper gives you more fruit than you actually paid for.

Why do you think the MUSLIM shopkeeper gave you extra fruit? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 6)

Imagine that you are walking one day. It unexpectedly begins to rain very heavily. A HINDU householder does not offer to shelter you from the rain.

Why do you think the HINDU householder did not offer to shelter you? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 7)

Imagine that you have a bad fall off your bicycle while cycling through town. A MUSLIM man passing by comes over to offer some help.

Why do you think the MUSLIM passer-by stopped to help? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 8)

Imagine that you are buying fruit in the market and a HINDU shopkeeper cheats you.

Why do you think the HINDU shopkeeper cheated you? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 9)

Imagine that you have a bad fall off your bicycle while cycling through town. A MUSLIM passer-by ignores you.

Why do you think the MUSLIM passer-by ignored you? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 10)

Imagine that you are buying fruit in the market and a HINDU shopkeeper gives you more fruit than you actually paid for.

Why do you think the HINDU shopkeeper gave you extra fruit? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 11)

Imagine that you are buying fruit in the market and a MUSLIM shopkeeper cheats you.

Why do you think the MUSLIM shopkeeper cheated you? Please write the one most important cause that comes to your mind.

.....

(Paragraph: 12)

Imagine that you are out walking one day and it unexpectedly begins to rain very heavily. A HINDU householder offers to shelter you from the rain.

Why do you think the HINDU householder offered to shelter you? Please write the one most important cause that comes to your mind.

.....

Finally, would you please fill in some personal details about yourself. We would like to assure you that these will not make you identifiable to us. But they will help us to arrange the data systematically. Thanks very much again for your help in this research.

1. What sex are you? ( M/F ) _____

2. Are you a Hindu or Muslim ( M/H ) _____

3. How old are you? ( in years ) _____

# APPENDIX D

## Summary Statistics for Intergroup Contact Study:

*F* Statistics from oneway ANOVAs on All Predictor and Criterion Variables.

| Variables | Sum of Squares | DF | Mean Squares | F | Sig of F |
|---|---|---|---|---|---|
| **Predictor Variables:** | | | | | |
| Amount of contact | 23.40 | 1,129 | 23.40 | 9.38 | .003 |
| Contact as equal | 91.76 | 1,129 | 91.76 | 21.65 | .000 |
| Voluntary contact | 1.83 | 1,129 | 1.83 | .52 | .472 |
| Intimate contact | 9.00 | 1,129 | 9.00 | 1.87 | .174 |
| Pleasant contact | 27.75 | 1,129 | 27.75 | 7.63 | .007 |
| Cooperative contact | 18.66 | 1,129 | 18.66 | 4.25 | .041 |
| Contact as group member | .17 | 1,129 | .17 | .04 | .835 |
| Outgroup members seen as typical | 14.57 | 1,129 | 14.57 | 4.26 | .041 |
| Awareness of similarities | 3.42 | 1,129 | 3.42 | .92 | .339 |
| Awareness of differences | 31.94 | 1,129 | 31.94 | 8.24 | .005 |
| **Criterion Variables:** | | | | | |
| Outgroup attitude | 15.64 | 1,129 | 15.64 | 6.55 | .012 |
| Perceived variability | 1.35 | 1,129 | 1.35 | 2.25 | .136 |
| Perceived similarity | 5.20 | 1,128 | 5.20 | 2.27 | .135 |
| Intergroup anxiety | 37.12 | 1,129 | 37.12 | 30.20 | .000 |

Factor Structure from Varimax Rotated Factor Analysis of Predictor Variables (Hindu Sample)

| | Factor | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Predictor Variables: | | | | |
| Contact: college/university: | .77 | | | |
| Contact as neighbour: | .89 | | | |
| Contact as friend: | .83 | | | |
| Informal talks: | .83 | | | |
| Visit outgroup homes: | .68 | | .42 | |
| Equal status contact: | | .82 | | |
| Voluntary contact: | .51 | .50 | | |
| Intimate contact: | | .38 | .67 | |
| Pleasant contact: | | .63 | .52 | |
| Cooperative contact: | | | .81 | |
| Contact as group members: | | -.65 | | |
| Typicality: | | -.63 | -.38 | |
| Awareness of similarities: | | | | .89 |
| Awareness of differences: | | | -.64 | .35 |

Only factor loadings equal to or greater than .35 are indicated. Factor 1 had an eigenvalue of 5.88 with a 42% variance. Factor 2 had an eigenvalue of 1.80 with a 12.9% variance. Factor 3 had an eigenvalue of 1.13 with a 8.1% variance. And Factor 4 had an eigenvalue of 1.03 with a 7.4% variance.

Factor Structure from Varimax Rotated Factor Analysis of Predictor Variables (Muslim Sample)

| | Factor | | | |
|---|---|---|---|---|
| | 1 | 2 | 3 | 4 |
| Predictor Variables: | | | | |
| Contact: college/university: | .80 | | | |
| Contact as neighbour: | .66 | | | .42 |
| Contact as friend: | .72 | | | |
| Informal talks: | .82 | | | |
| Visit outgroup homes: | .65 | | | .47 |
| Equal status contact: | | | .91 | |
| Voluntary contact: | .76 | | | |
| Intimate contact: | .73 | | | |
| Pleasant contact: | .47 | | .48 | |
| Cooperative contact: | .48 | | .49 | |
| Contact as group members: | | .77 | | |
| Typicality: | | .80 | | |
| Awareness of similarities: | | .38 | | .74 |
| Awareness of differences: | -.44 | .47 | | .35 |

Only factor loadings equal to or greater than .35 are indicated. Factor 1 had an eigenvalue of 4.83 with a 35.5% variance. Factor 2 had an eigenvalue of 1.91 with a 13.6% variance. Factor 3 had an eigenvalue of 1.28 with a 9.2% variance. And Factor 4 had an eigenvalue of 1.05 with a 7.5% variance.

Mean Ratings on Predictor and Criterion Variables for Male and Female Respondents (Hindu Sample).

| Variables | MALE Mean | MALE SD | FEMALE Mean | FEMALE SD | F(1,63) |
|---|---|---|---|---|---|
| **Predictor Variables:** | | | | | |
| Amount of contact | 4.88 | 1.71 | 5.43 | 1.50 | 1.14 |
| Contact as equal | 4.42 | 2.37 | 4.92 | 2.66 | < 1 |
| Voluntary contact | 5.35 | 1.94 | 5.46 | 2.27 | < 1 |
| Intimate contact | 4.63 | 2.28 | 3.46 | 2.75 | 2.52 |
| Pleasant contact | 4.21 | 2.23 | 4.38 | 2.46 | < 1 |
| Cooperative contact | 4.50 | 2.27 | 2.92 | 2.66 | 4.68 |
| Contact as group member | 2.44 | 1.94 | 1.69 | 1.65 | 1.63 |
| Outgroup members seen as typical | 4.90 | 1.79 | 5.53 | 1.33 | 1.42 |
| Awareness of similarities | 4.42 | 1.84 | 4.00 | 2.34 | < 1 |
| Awareness of differences | 5.15 | 1.73 | 5.30 | 1.75 | < 1 |
| **Criterion Variables:** | | | | | |
| Outgroup attitude | 3.38 | 1.79 | 3.38 | 1.85 | < 1 |
| Perceived variability | 3.41 | .85 | 3.26 | .66 | < 1 |
| Perceived similarity | 5.40 | 1.48 | 5.38 | 1.38 | < 1 |
| Intergroup anxiety | 4.76 | 1.25 | 4.83 | .79 | < 1 |

Mean Ratings on Predictor and Criterion Variables for Male and Female Respondents (Muslim Sample).

| Variables | MALE | | FEMALE | | F(1,64) |
|---|---|---|---|---|---|
| | Mean | SD | Mean | SD | |
| **Predictor Variables:** | | | | | |
| Amount of contact | 4.03 | 1.53 | 4.37 | 1.35 | < 1 |
| Contact as equal | 6.11 | 1.72 | 6.38 | 1.43 | < 1 |
| Voluntary contact | 5.40 | 1.75 | 6.04 | 1.62 | < 1 |
| Intimate contact | 4.91 | 1.95 | 4.95 | 2.03 | < 1 |
| Pleasant contact | 5.15 | 1.54 | 5.19 | 1.36 | < 1 |
| Cooperative contact | 4.84 | 1.62 | 5.14 | 1.93 | < 1 |
| Contact as group member | 2.55 | 2.11 | 1.95 | 1.75 | 1.29 |
| Outgroup members seen as typical | 4.26 | 1.92 | 4.57 | 2.08 | < 1 |
| Awareness of similarities | 4.11 | 1.92 | 3.80 | 1.93 | < 1 |
| Awareness of differences | 4.40 | 2.06 | 3.76 | 2.42 | 1.22 |
| **Criterion Variables:** | | | | | |
| Outgroup attitude | 4.06 | 1.23 | 4.09 | 1.33 | < 1 |
| Perceived variability | 3.05 | .66 | 3.44 | .82 | 4.05 |
| Perceived similarity | 4.95 | 1.61 | 5.10 | 1.51 | < 1 |
| Intergroup anxiety | 3.72 | 1.05 | 3.66 | 1.07 | < 1 |

Regression Analysis for the Entire Sample.

Criterion Variable: OUTGROUP ATTITUDE

| | |
|---|---|
| Multiple R | .639 |
| R Square | .409 |
| Adjusted R Square | .395 |
| Standard Error | 1.227 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 3 | 132.32 | 44.10 |
| Residual | 127 | 191.31 | 1.51 |

F = 29.28 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Pleasant contact | .346 | .069 | .429 | 24.54 | .000 |
| Contact as equal | .120 | .057 | .170 | 4.47 | .035 |
| Intimate contact | .119 | .057 | .167 | 4.36 | .038 |
| (Constant) | .896 | .330 | | 7.34 | .008 |

Criterion Variable: PERCEIVED OUTGROUP VARIABILITY

| | |
|---|---|
| Multiple R | .631 |
| R Square | .399 |
| Adjusted R Square | .389 |
| Standard Error | .607 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 2 | 31.29 | 15.65 |
| Residual | 128 | 47.21 | .36 |

F = 42.42 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Amount of contact | .248 | .033 | .519 | 54.20 | .000 |
| Outgroup members seen as typical | -.105 | .029 | -.254 | 12.93 | .000 |
| (Constant) | 2.644 | .236 | | 125.86 | .000 |

Criterion Variable: INTERGROUP ANXIETY

| | |
|---|---|
| Multiple R | .737 |
| R Square | .543 |
| Adjusted R Square | .528 |
| Standard Error | .842 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 106.35 | 26.58 |
| Residual | 126 | 89.34 | .70 |

F = 37.49 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Outgroup members seen as typical | .212 | .045 | .324 | 22.36 | .000 |
| Religiuos group of Ss. (dummy var.) | 1.051 | .162 | .430 | 41.81 | .000 |
| Amount of contact | -.254 | .050 | -.338 | 25.57 | .000 |
| Awareness of differences | .087 | .042 | .144 | 4.32 | .039 |
| (Constant) | 3.466 | .362 | | 91.41 | .000 |

*Note: Muslim and Hindu respondents were coded as 0 and 1, respectively in the dummy variable.*

Regression Analysis for the Entire Sample

(All Predictors in the Equation):

Criterion Variable: OUTGROUP ATTITUDE

| | |
|---|---|
| Multiple R | .678 |
| R Square | .460 |
| Adjusted R Square | .410 |
| Standard Error | 1.210 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 11 | 148.98 | 13.54 |
| Residual | 119 | 174.66 | 1.47 |

F = 9.22 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Amount of contact | .180 | .091 | .186 | 3.90 | .051 |
| Contact as equal | .133 | .063 | .187 | 4.49 | .036 |
| Voluntary contact | -.228 | .083 | -.271 | 7.46 | .007 |
| Intimate contact | .133 | .074 | .186 | 3.32 | .071 |
| Pleasant contact | .357 | .075 | .442 | 22.30 | .000 |
| Cooperative contact | .041 | .064 | .056 | .42 | .517 |
| Contact as group member | .038 | .062 | .05 | .374 | .542 |
| Typicality | .011 | .071 | .013 | .03 | .873 |
| Awareness of similarities | .011 | .058 | .014 | .04 | .844 |
| Awareness of differences | -.038 | .065 | -.048 | .34 | .560 |
| Religious group of respondents (dummy var.) | -.214 | .255 | -.068 | .70 | .403 |
| (Constant) | 1.040 | .708 | | 2.17 | .143 |

*Note: Muslim and Hindu respondents were coded as 0 and 1, respectively in the dummy variable.*

Criterion Variable: PERCEIVED OUTGROUP VARIABILITY

| | |
|---|---|
| Multiple R | .665 |
| R Square | .442 |
| Adjusted R Square | .391 |
| Standard Error | .606 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 11 | 34.75 | 3.15 |
| Residual | 119 | 43.74 | .37 |

F = 8.59 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Amount of contact | .273 | .046 | .572 | 35.73 | .000 |
| Contact as equal | -.021 | .031 | -.060 | .45 | .501 |
| Voluntary contact | -.063 | .041 | -.153 | 2.31 | .130 |
| Intimate contact | -.009 | .037 | -.026 | .06 | .802 |
| Pleasant contact | .043 | .038 | .110 | 1.34 | .249 |
| Cooperative contact | -.032 | .032 | -.089 | 1.03 | .313 |
| Contact as group member | -.003 | .031 | -.009 | .02 | .901 |
| Typicality | -.114 | .036 | -.275 | 10.12 | .001 |
| Awareness of similarities | .047 | .029 | .118 | 2.70 | .102 |
| Awareness of differences | -.034 | .032 | -.089 | 1.11 | .294 |
| Religious group of respondents (dummy var.) | .026 | .127 | .017 | .04 | .837 |
| (Constant) | 2.970 | .354 | | 70.49 | .000 |

*Note: Muslim and Hindu respondents were coded as 0 and 1, respectively in the dummy variable.*

Criterion Variable: INTERGROUP ANXIETY

| | |
|---|---|
| Multiple R | .756 |
| R Square | .571 |
| Adjusted R Square | .536 |
| Standard Error | .835 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 11 | 113.21 | 10.29 |
| Residual | 119 | 82.48 | .69 |

F = 14.84 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Amount of contact | -.185 | .062 | -.246 | 8.73 | .003 |
| Contact as equal | -.042 | .043 | -.077 | .97 | .326 |
| Voluntary contact | -.043 | .057 | -.065 | .56 | .454 |
| Intimate contact | .022 | .050 | .040 | .19 | .658 |
| Pleasant contact | -.071 | .052 | -.113 | 1.87 | .173 |
| Cooperative contact | -.035 | .044 | -.061 | .64 | .426 |
| Contact as group member | .002 | .042 | .004 | .01 | .945 |
| Typicality | .182 | .049 | .278 | 13.73 | .003 |

(continued on next page)

| | | | | | |
|---|---|---|---|---|---|
| Awareness of similarities | -.042 | .039 | -.066 | 1.12 | .291 |
| Awareness of differences | .086 | .044 | .141 | 3.66 | .058 |
| Religious group of respondents (dummy var.) | .866 | .176 | .354 | 24.32 | .000 |
| (Constant) | 4.420 | .487 | | 82.34 | .000 |

*Note: Muslim and Hindu respondents were coded as 0 and 1, respectively in the dummy variable.*

Regression Analysis for the Hindu Sample.

Criterion Variable: OUTGROUP ATTITUDE

| | |
|---|---|
| Multiple R | .748 |
| R Square | .560 |
| Adjusted R Square | .538 |
| Standard Error | 1.217 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 3 | 115.03 | 38.34 |
| Residual | 61 | 90.35 | 1.48 |

F = 25.88 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Pleasant contact | .402 | .085 | .508 | 22.32 | .000 |
| Cooperative contact | .156 | .074 | .211 | 4.50 | .037 |
| Amount of contact | .199 | .102 | .187 | 3.76 | .050 |
| (Constant) | .027 | .497 | | .00 | .956 |

Criterion Variable: PERCEIVED OUTGROUP VARIABILITY

| | |
|---|---|
| Multiple R | .627 |
| R Square | .393 |
| Adjusted R Square | .373 |
| Standard Error | .641 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 2 | 16.52 | 8.26 |
| Residual | 62 | 25.50 | .41 |

F = 20.08 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Amount of contact | .240 | .051 | .497 | 21.91 | .000 |
| Outgroup members seen as typical | -.114 | .049 | -.243 | 5.22 | .0257 |
| (Constant) | 2.750 | .426 | | 41.89 | .000 |

Criterion Variable: INTERGROUP ANXIETY

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .764 | Analysis of Variance: | | | |
| R Square | .585 | | | | |
| Adjusted R Square | .571 | | DF | SS | MS |
| Standard Error | .761 | Regression | 2 | 50.62 | 25.31 |
| | | Residual | 62 | 35.96 | .58 |
| | | F = 43.64 | | Sig. of F = .0000 | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Outgroup members seen as typical | .329 | .059 | .488 | 30.92 | .000 |
| Amount of contact | -.304 | .061 | -.437 | 24.82 | .000 |
| (Constant) | 4.626 | .506 | | 83.59 | .000 |

Regression Analysis for the Muslim Sample.

Criterion Variable: OUTGROUP ATTITUDE

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .326 | Analysis of Variance: | | | |
| R Square | .107 | | | | |
| Adjusted R Square | .093 | | DF | SS | MS |
| Standard Error | 1.196 | Regression | 1 | 10.95 | 10.95 |
| | | Residual | 64 | 91.67 | 1.43 |
| | | F = 7.64 | | Sig. of F = .0074 | |

| Predictor Variable | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Intimate contact | .209 | .075 | .327 | 7.64 | .007 |
| (Constant) | 3.047 | .400 | | 57.91 | .000 |

Criterion Variable: PERCEIVED OUTGROUP VARIABILITY

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .667 | Analysis of Variance: | | | |
| R Square | .446 | | | | |
| Adjusted R Square | .419 | | DF | SS | MS |
| Standard Error | .560 | Regression | 3 | 15.65 | 5.22 |
| | | Residual | 62 | 19.47 | .31 |
| | | F = 16.61 | | Sig. of F = .0000 | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Amount of contact | .222 | .049 | .446 | 20.39 | .000 |
| Outgroup members seen as typical | -.128 | .037 | -.343 | 11.79 | .001 |
| Awareness of similarities | .096 | .037 | .250 | 6.60 | .012 |
| (Constant) | 2.437 | .306 | | 63.35 | .000 |

Criterion Variable: INTERGROUP ANXIETY

Multiple R .579
R Square .336
Adjusted R Square .304
Standard Error .878

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 3 | 24.17 | 8.06 |
| Residual | 62 | 47.80 | .77 |

F = 10.45 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Awareness of differences | .142 | .055 | .295 | .6.59 | .012 |
| Amount of contact | -.183 | .077 | -.257 | 5.60 | .021 |
| Outgroup members seen as typical | .126 | .061 | .236 | 4.25 | .043 |
| (Constant) | 3.316 | .500 | | 43.85 | .000 |

Path Analysis: (Hindu Sample)

Intergroup Anxiety Model

Criterion Variable: INTERGROUP ANXIETY

Multiple R .525
R Square .276
Adjusted R Square .252
Standard Error 1.005

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 2 | 23.92 | 11.96 |
| Residual | 62 | 62.67 | 1.01 |

F = 11.84 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Cooperative contact | -.121 | .055 | -.253 | 4.84 | .031 |
| Equal status contact | -.183 | .055 | -.381 | 10.94 | .001 |
| (Constant) | 6.110 | .303 | | 406.41 | .000 |

Criterion Variable: OUTGROUP ATTITUDE

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .641 | Analysis of Variance: | | | |
| R Square | .412 | | | | |
| Adjusted R Square | .383 | | DF | SS | MS |
| Standard Error | 1.407 | Regression | 3 | 84.62 | 28.21 |
| | | Residual | 61 | 120.76 | 1.98 |

F = 14.25 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Cooperative contact | .265 | .080 | .357 | 10.81 | .001 |
| Equal status contact | .189 | .084 | .255 | 5.05 | .028 |
| Intergroup anxiety | -.329 | .178 | -.214 | 3.45 | .050 |
| (Constant) | 2.991 | 1.166 | | 6.59 | .012 |

Path analysis:

Interpersonal Contact Model (Hindu Sample)

Criterion Variable: CONTACT AS GROUP MEMBERS

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .358 | Analysis of Variance: | | | |
| R Square | .128 | | | | |
| Adjusted R Square | .100 | | DF | SS | MS |
| Standard Error | 1.804 | Regression | 2 | 29.74 | 14.87 |
| | | Residual | 62 | 201.70 | 3.25 |

F = 4.57 Sig. of F = .0141

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Intimate contact | -.175 | .102 | -.222 | 2.93 | .092 |
| Equal status contact | -.161 | .102 | -.205 | 2.50 | .119 |
| (Constant) | 3.793 | .545 | | 48.43 | .000 |

Criterion Variable: AWARENESS OF DIFFERENCES

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .405 | Analysis of Variance: | | | |
| R Square | .163 | | | | |
| Adjusted R Square | .122 | | DF | SS | MS |
| Standard Error | 1.613 | Regression | 3 | 31.06 | 10.35 |
| | | Residual | 61 | 158.72 | 2.60 |

F = 3.98 Sig. of F = .0118

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Intimate contact | -.282 | .094 | -.394 | 9.02 | .004 |
| Equal status contact | .077 | .093 | .108 | .69 | .410 |
| Contact as group members | .099 | .113 | .109 | .77 | .385 |
| (Constant) | 5.850 | .651 | | 80.71 | .000 |

Criterion Variable: OUTGROUP ATTITUDE

| | |
|---|---|
| Multiple R | .627 |
| R Square | .393 |
| Adjusted R Square | .352 |
| Standard Error | 1.442 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 80.67 | 20.17 |
| Residual | 61 | 124.71 | 2.08 |

F = 9.70 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Intimate contact | .208 | .090 | .279 | 5.32 | .024 |
| Equal status contact | .272 | .084 | .367 | 10.56 | .001 |
| Contact as group members | .066 | .102 | .071 | .42 | .516 |
| Awareness of differences | -.254 | .114 | -.244 | 4.94 | .030 |
| (Constant) | 2.409 | .886 | | 7.391 | .008 |

Path Analysis: (Muslim Sample)

Intergroup Anxiety Model

Criterion Variable: INTERGROUP ANXIETY

| | |
|---|---|
| Multiple R | .361 |
| R Square | .130 |
| Adjusted R Square | .103 |
| Standard Error | .997 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 2 | 9.39 | 4.69 |
| Residual | 63 | 62.58 | .99 |

F = 4.73 Sig. of F = .0122

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Cooperative contact | -.233 | .076 | -.380 | 9.30 | .003 |
| Equal status contact | .052 | .080 | .081 | .43 | .515 |
| (Constant) | 4.530 | .529 | | 73.16 | .000 |

Criterion Variable: OUTGROUP ATTITUDE

| | |
|---|---|
| Multiple R | .397 |
| R Square | .158 |
| Adjusted R Square | .116 |
| Standard Error | 1.180 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 3 | 16.17 | 5.39 |
| Residual | 62 | 86.45 | 1.39 |

F = 3.86 Sig. of F = .0134

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Cooperative contact | -.046 | .097 | -.063 | .23 | .636 |
| Equal status contact | .202 | .096 | .262 | 4.46 | .038 |
| Intergroup anxiety | -.382 | .149 | -.320 | 6.56 | .013 |
| (Constant) | 4.467 | .922 | | 23.45 | .000 |

Path Analysis:

Interpersonal Contact Model (Muslim Sample)

Criterion Variable: CONTACT AS GROUP MEMBERS

| | |
|---|---|
| Multiple R | .218 |
| R Square | .047 |
| Adjusted R Square | .017 |
| Standard Error | 1.995 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 2 | 12.46 | 6.23 |
| Residual | 63 | 250.81 | 3.98 |

F = 1.57 Sig. of F = .217

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Intimate contact | -.134 | .130 | -.131 | 1.06 | .307 |
| Equal status contact | -.176 | .157 | -.143 | 1.26 | .266 |
| (Constant) | 4.119 | 1.048 | | 15.45 | .000 |

Criterion Variable: AWARENESS OF DIFFERENCES

| | |
|---|---|
| Multiple R | .434 |
| R Square | .188 |
| Adjusted R Square | .149 |
| Standard Error | 2.015 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 3 | 58.57 | 19.52 |
| Residual | 62 | 251.86 | 4.06 |

F = 4.81 Sig. of F = .004

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Intimate contact | -.453 | .133 | -.407 | 11.65 | .001 |
| Equal status contact | .113 | .160 | .084 | .49 | .483 |
| Contact as group members | .147 | .127 | .136 | 1.35 | .249 |
| (Constant) | 5.380 | 1.181 | | 20.73 | .000 |

Criterion Variable: OUTGROUP ATTITUDE

| | |
|---|---|
| Multiple R | .392 |
| R Square | .154 |
| Adjusted R Square | .098 |
| Standard Error | 1.192 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 15.83 | 3.95 |
| Residual | 61 | 86.79 | 1.42 |

F = 2.780 Sig. of F = .0345

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Intimate contact | .176 | .086 | .275 | 4.22 | .044 |
| Equal status contact | .158 | .095 | .204 | 2.75 | .102 |
| Contact as group members | .080 | .076 | .129 | 1.12 | .293 |
| Awareness of differences | -.027 | .075 | -.048 | .14 | .714 |
| (Constant) | 2.153 | .808 | | 7.11 | .009 |

# APPENDIX E

## Summary Statistics for Crossed-categorization Studies:

STUDY 4.1

Analysis of Variance on Target Group Evaluations, Perceived Variability (Pd & SD) and Perceived Similarity:

Design: 2 (Religious Group of Subjects: Hindu/Muslim) x
4 (Categorization Conditions: double ingroup/in-outgroup/out-ingroup/double outgroup)

TARGET GROUP EVALUATIONS:

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 220.36 | 4 | 55.09 | 50.12 | .000 |
| Ss Religious Group | 3.42 | 1 | 3.42 | 3.11 | .080 |
| Conditions | 216.07 | 3 | 72.02 | 65.52 | .000 |
| 2-Way Interaction: | | | | | |
| Ss Group x Conditions | 4.83 | 3 | 1.61 | 1.46 | .228 |
| Explained | 225.19 | 7 | 32.17 | 29.26 | .000 |
| Residual | 131.91 | 120 | 1.10 | | |
| Total | 357.11 | 127 | 2.81 | | |

PERCEIVED VARIABILITY (Pd):

ANALYSIS: Probability of Differentiation.

The probability of differentiation (Pd) was calculated for each trait, using the following computer program.

The following computer program on SPSSx calculates the probability of differentiation for one trait. This analysis was repeated separately for each trait. The number of people assigned to each box in the task was entered as discrete data and labelled OGLWHE0 - OGLWHE7, with OGLWHE0 being the number of people assigned to box 1 and so on.

```
===== DO REPEAT C=OGLWHE0 TO OGLWHE7/I=O 1 TO
                7/D=FOGWHE0 FOGWHE1 TO FOGWHE7
===== COMPUTE D=C*I
===== END REPEAT
===== COMPUTE NOGWHE=SUM(OGLWHE0 TO OGLWHE7)
===== DO REPEAT A=OGLWHE0 TO OGLWHE7/F=POGWHE0
                POGWHE1 TO POGWHE7
===== COMPUTE F=(A/NOGWHE)**2
===== END REPEAT
===== COMPUTE PDOGWHE=1-SUM(POGWHE0 TO POGWHE7)
```

ANALYSIS OF VARIANCE:

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | .05 | 4 | .01 | .49 | .744 |
| Ss Religious Group | .02 | 1 | .02 | .96 | .330 |
| Conditions | .02 | 3 | .01 | .34 | .798 |
| 2-Way Interaction: | | | | | |
| Ss Group x Conditions | .12 | 3 | .04 | 1.68 | .174 |
| Explained | .16 | 7 | .02 | 1.00 | .434 |
| Residual | 2.75 | 120 | .02 | | |
| Total | 2.91 | 127 | .02 | | |

PERCEIVED VARIABILITY (SD):

ANALYSIS: Standard Deviation.

The standard deviation (SD) was computed from the following computer program on SPSSx, for each trait. The number of people assigned to each box in the task was entered as a discrete piece of data, labelled F1 - F8 being the number assigned to box 1 and so an.

```
= = = = COMPUTE T1=1*F1
= = = = COMPUTE T2=2*F2
= = = = COMPUTE T3=3*F3
= = = = COMPUTE T4=4*F4
= = = = COMPUTE T5=5*F5
= = = = COMPUTE T6=6*F6
= = = = COMPUTE T7=7*F7
= = = = COMPUTE T8=8*F8
= = = = COMPUTE N=(F1 + F2 + F3 + F4 + F5 + F6 + F7 + F8)
= = = = COMPUTE MEAN = (T1 + T2 + T3 + T4 + T5 + T6 + T7 + F8)/N
= = = = COMPUTE SS=F1*(1-MEAN)*(1-MEAN)
                    + F2*(2-MEAN)*(2-MEAN)
                    + F3*(3-MEAN)*(3-MEAN)
                    + F4*(4-MEAN)*(4-MEAN)
                    + F5*(5-MEAN)*(5-MEAN)
                    + F6*(6-MEAN)*(6-MEAN)
                    + F7*(7-MEAN)*(7-MEAN)
                    + F8*(8-MEAN)*(8-MEAN)
= = = = COMPUTE VARIANCE = SS/(N-1)
= = = = COMPUTE SD = (SQRT(VARIANCE)
```

ANALYSIS OF VARIANCE:

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | .55 | 4 | .14 | .58 | .676 |
| Ss Religious Group | .11 | 1 | .11 | .45 | .504 |
| Conditions | .44 | 3 | .15 | .62 | .602 |
| 2-Way Interaction: | | | | | |
| Ss Group x Conditions | 1.94 | 3 | .65 | 2.73 | .047 |
| Explained | 2.50 | 7 | .36 | 1.50 | .172 |
| Residual | 28.44 | 120 | .24 | | |
| Total | 30.94 | 127 | .25 | | |

PERCEIVED SIMILARITY:

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 36.47 | 4 | 9.11 | 3.78 | .006 |
| Ss Religious Group | 9.79 | 1 | 9.79 | 4.07 | .046 |
| Conditions | 26.15 | 3 | 8.71 | 3.62 | .015 |
| 2-Way Interaction: | | | | | |
| Ss Group x Conditions | 71.25 | 3 | 23.75 | 9.86 | .000 |
| Explained | 107.73 | 7 | 15.39 | 6.39 | .000 |
| Residual | 284.14 | 118 | 2.41 | | |
| Total | 391.87 | 125 | 3.14 | | |

Additional Analysis:

Analysis of Variance on Target Group Evaluations.

Design: 2 (Religious Group of Subjects: Hindu/Muslim) x
2 (Nationality: similar/different) x 2 (Religion: similar/different).

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 220.07 | 3 | 73.36 | 66.73 | .000 |
| Ss Religious Group | 3.42 | 1 | 3.42 | 3.11 | .080 |
| Nationality | 9.09 | 1 | 9.09 | 8.27 | .005 |
| Religion | 205.29 | 1 | 205.29 | 186.74 | .000 |
| 2-Way Interactions: | 4.91 | 3 | 1.64 | 1.49 | .221 |
| Ss Group x Nationality | .37 | 1 | .37 | .34 | .563 |
| Ss Group x Religion | 4.22 | 1 | 4.22 | 3.83 | .050 |
| Nationality x Religion | .28 | 1 | .28 | .26 | .612 |

| | | | | | |
|---|---|---|---|---|---|
| 3-Way Interaction: Ss group x Nationality x Religion | .21 | 1 | .21 | .19 | .667 |
| Explained | 225.19 | 7 | 32.17 | 29.27 | .000 |
| Residual | 131.91 | 120 | 1.10 | | |
| Total | 357.11 | 127 | 2.814 | | |

## STUDY 4.2

Analysis of Variance on Target Group Evaluations, Perceived Variability, Personal Self-esteem and Collective Self-esteem.
Design: 2 (Religious Group of Subjects: Hindu/Muslim) x
6 (Categorization Conditions: triple ingroup/in-out-ingroup/out-in-ingroup/in-out-outgroup/out-out-ingroup/triple outgroup).

## TARGET GROUP EVALUATIONS:

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 114.66 | 6 | 24.11 | 29.55 | .000 |
| Ss Religious Group | 1.47 | 1 | 1.47 | 1.80 | .181 |
| Conditions | 143.05 | 5 | 28.61 | 35.07 | .000 |
| 2-Way Interaction: Ss Group x Conditions | 13.05 | 5 | 2.61 | 3.20 | .008 |
| Explained | 157.69 | 11 | 14.34 | 17.57 | .000 |
| Residual | 183.54 | 225 | .82 | | |
| Total | 341.23 | 236 | 1.44 | | |

## PERCEIVED VARIABILITY:

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 23.63 | 6 | 3.93 | 2.27 | .037 |
| Ss Religious Group | .37 | 1 | .37 | .22 | .642 |
| Conditions | 23.25 | 5 | 5.65 | 2.69 | .022 |
| 2-Way Interaction: Ss Group x Conditions | 22.49 | 5 | 4.50 | 2.60 | .026 |
| Explained | 46.12 | 11 | 4.19 | 2.43 | .007 |
| Residual | 388.97 | 225 | 1.73 | | |
| Total | 435.08 | 236 | 1.84 | | |

PERSONAL SELF-ESTEEM:

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 25.49 | 6 | 4.25 | 5.50 | .000 |
| Ss Religious Group | 19.36 | 1 | 19.36 | 25.05 | .000 |
| Conditions | 5.67 | 5 | 1.14 | 1.47 | .201 |
| 2-Way Interaction: | | | | | |
| Ss Group x Conditions | 2.03 | 5 | .41 | .53 | .757 |
| Explained | 27.52 | 11 | 2.50 | 3.23 | .000 |
| Residual | 173.84 | 225 | .77 | | |
| Total | 201.36 | 236 | .85 | | |

COLLECTIVE SELF-ESTEEM:

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 41.56 | 6 | 6.93 | 9.37 | .000 |
| Ss Religious Group | 37.39 | 1 | 37.39 | 50.56 | .000 |
| Conditions | 4.01 | 5 | .80 | 1.08 | .370 |
| 2-Way Interaction: | | | | | |
| Ss Group x Conditions | 2.56 | 5 | .45 | .61 | .692 |
| Explained | 43.82 | 11 | 3.98 | 5.39 | .000 |
| Residual | 165.64 | 224 | .74 | | |
| Total | 209.46 | 235 | .89 | | |

# APPENDIX F

## Summary Statistics for Intergroup Attribution Studies:

STUDY 5.1

Analysis of Variance on Causal Dimensions:
Design: 2 (Actor: ingroup/outgroup) x 2 (Outcome: positive/negative) x 2 (Religious group of Subjects: Muslim/Hindu)

LOCUS OF CAUSALITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 140.49 | 114 | 1.23 | | |
| Religious Group | 18.11 | 1 | 18.11 | 14.69 | .000 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 83.56 | 114 | .73 | | |
| Actor | 9.77 | 1 | 9.77 | 13.33 | .000 |
| Group X Actor | .44 | 1 | .44 | .60 | .439 |
| Within Cells | 103.45 | 114 | .91 | | |
| Outcome | .01 | 1 | .01 | .01 | .935 |
| Group X Outcome | 1.35 | 1 | 1.85 | 2.04 | .156 |
| Within Cells | 98.00 | 114 | .86 | | |
| Actor X Outcome | 74.83 | 1 | 74.83 | 87.05 | .000 |
| Group X Actor X Outcome | 101.17 | 1 | 101.17 | 117.69 | .000 |

STABILITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 326.31 | 115 | 2.84 | | |
| Religious Group | 16.05 | 1 | 16.05 | 5.66 | .019 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 140.96 | 115 | 1.23 | | |
| Actor | 10.89 | 1 | 10.89 | 8.88 | .004 |
| Group X Actor | 5.83 | 1 | 5.83 | 4.75 | .031 |
| Within Cells | 153.77 | 115 | 1.34 | | |
| Outcome | 17.65 | 1 | 17.65 | 13.20 | .000 |
| Group X Outcome | 4.38 | 1 | 4.38 | 3.28 | .073 |

| | | | | | |
|---|---|---|---|---|---|
| Within Cells | 163.66 | 115 | 1.42 | | |
| Actor X Outcome | 106.39 | 1 | 106.39 | 74.76 | .000 |
| Group X Actor X Outcome | 161.89 | 1 | 161.89 | 113.75 | .000 |

CONTROLLABILITY BY OTHERS.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 335.55 | 115 | 2.92 | | |
| Religious Group | 2.24 | 1 | 2.24 | .77 | .382 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 184.95 | 115 | 1.61 | | |
| Actor | 2.12 | 1 | 2.12 | 1.32 | .253 |
| Group X Actor | 3.07 | 1 | 3.07 | 1.91 | .170 |
| Within Cells | 146.56 | 115 | 1.27 | | |
| Outcome | .04 | 1 | .04 | .03 | .868 |
| Group X Outcome | 1.43 | 1 | 1.43 | 1.12 | .292 |
| Within Cells | 187.28 | 115 | 1.63 | | |
| Actor X Outcome | 31.27 | 1 | 31.27 | 19.20 | .000 |
| Group X Actor X Outcome | 101.66 | 1 | 101.66 | 62.43 | .000 |

GLOBALITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 307.57 | 115 | 2.67 | | |
| Religious Group | 3.03 | 1 | 3.03 | 1.13 | .289 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 114.87 | 115 | 1.00 | | |
| Actor | 9.75 | 1 | 9.75 | 9.76 | .002 |
| Group X Actor | 2.22 | 1 | 2.22 | 2.23 | .138 |
| Within Cells | 94.85 | 115 | .82 | | |
| Outcome | 29.06 | 1 | 29.06 | 35.24 | .000 |
| Group X Outcome | 6.35 | 1 | 6.35 | 7.69 | .006 |
| Within Cells | 167.82 | 115 | 1.46 | | |
| Actor X Outcome | 100.88 | 1 | 100.88 | 69.13 | .000 |
| Group X Actor X Outcome | 142.93 | 1 | 142.93 | 97.94 | .000 |

REGRESSION ANALYSIS.

POSITIVE OUTCOME CONDITION:

Religious Group of Subject: MUSLIM
Religious Categorization of Actor: INGROUP
Criterion Variable: HAPPINESS

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .646 | Analysis of Variance: | | | |
| R Square | .417 | | | | |
| Adjusted R Square | .374 | | DF | SS | MS |
| Standard Error | .506 | Regression | 4 | 9.86 | 2.46 |
| | | Residual | 54 | 13.80 | .25 |

F = 9.651 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .389 | .124 | .370 | 9.844 | .003 |
| Stability | .111 | .080 | .157 | 1.926 | .171 |
| Controllability | .050 | .054 | .099 | .863 | .357 |
| Globality | .353 | .117 | .337 | 9.046 | .004 |
| (Constant) | .733 | .841 | | .760 | .387 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Happy. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .339 ** | 1.000 | | | |
| Control | -.237 * | .019 | 1.000 | | |
| Global | .336 ** | .280 * | -.084 | 1.000 | |
| Happiness | .514 *** | .379 ** | -.013 | .498 *** | 1.000 |

Note. n = 59; * p <.05, ** p < 01, p < .001.

Religious Group of Subject: HINDU
Religious Categorization of Actor: INGROUP
Criterion Variable: HAPPINESS

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .473 | Analysis of Variance: | | | |
| R Square | .223 | | | | |
| Adjusted R Square | .165 | | DF | SS | MS |
| Standard Error | .880 | Regression | 4 | 11.83 | 2.95 |
| | | Residual | 53 | 41.06 | .77 |

F = 3.818 Sig. of F = .0084

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .342 | .115 | .393 | 8.789 | .005 |
| Stability | .095 | .088 | .148 | 1.170 | .284 |
| Controllability | -.011 | .079 | -.019 | .021 | .886 |
| Globality | .066 | .126 | .071 | .278 | .600 |
| (Constant) | 2.827 | .927 | | 9.292 | .003 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Happy. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .099 | 1.000 | | | |
| Control | -.201 | -.419 ** | 1.000 | | |
| Global | .354 ** | .233 * | -.031 | 1.000 | |
| Happiness | .437 *** | .213 | -.163 | .245 * | 1.000 |

Note. n = 58; * p <.05, ** p < 01, p < .001.

Religious Group of Subject: MUSLIM
Religious Categorization of Actor: OUTGROUP
Criterion Variable: HAPPINESS

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .366 | Analysis of Variance: | | | |
| R Square | .134 | | | | |
| Adjusted R Square | .070 | | DF | SS | MS |
| Standard Error | .705 | Regression | 4 | 4.17 | 1.04 |
| | | Residual | 54 | 26.90 | .49 |
| | | F = 2.091 | | Sig. of F = .094 | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.101 | .126 | -.128 | .652 | .423 |
| Stability | .117 | .111 | .147 | 1.111 | .296 |
| Controllability | -.071 | .087 | -.106 | .669 | .417 |
| Globality | -.144 | .085 | -.275 | 2.857 | .096 |
| (Constant) | 5.544 | .664 | | 69.559 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Happy. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .285 * | 1.000 | | | |
| Control | .105 | -.164 | 1.000 | | |
| Global | .590 *** | .375 ** | .010 | 1.000 | |
| Happiness | -.260 * | -.025 | -.147 | -.297 * | 1.000 |

Note. n = 58; * p <.05, ** p < .01, *** p <.001.

Religious Group of Subject: HINDU
Religious Categorization of Actor: OUTGROUP
Criterion Variable: HAPPINESS

| | |
|---|---|
| Multiple R | .454 |
| R Square | .206 |
| Adjusted R Square | .146 |
| Standard Error | .949 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 12.38 | 3.09 |
| Residual | 53 | 47.81 | .90 |

F = 3.43 Sig. of F = .0144

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.183 | .165 | -.141 | 1.235 | .271 |
| Stability | -.169 | .076 | -.295 | 4.880 | .031 |
| Controllability | -.219 | .092 | -.307 | 5.610 | .021 |
| Globality | -.122 | .105 | -.152 | 1.328 | .254 |
| (Constant) | 7.554 | 1.040 | | 52.740 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Happy. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.029 | 1.000 | | | |
| Control | .010 | -.299 * | 1.000 | | |
| Global | .249 * | .234 * | .058 | 1.000 | |
| Happiness | -.174 | -.235 * | -.229 * | -.274 * | 1.000 |

Note. n = 58; * p <.05.

Religious Group of Subject: MUSLIM
Religious Categorization of Actor: INGROUP
Criterion Variable: PRIDE

| | |
|---|---|
| Multiple R | .611 |
| R Square | .375 |
| Adjusted R Square | .328 |
| Standard Error | .819 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 21.74 | 5.43 |
| Residual | 54 | 36.27 | .67 |

F = 8.091 Sig. of F = .0000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .611 | .201 | .371 | 9.216 | .003 |
| Stability | .102 | .130 | .091 | .615 | .436 |
| Controllability | -.029 | .087 | -.037 | .114 | .736 |
| Globality | .516 | .190 | .316 | 7.395 | .009 |
| (Constant) | -1.032 | 1.364 | | .573 | .452 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Pride. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .339 ** | 1.000 | | | |
| Control | -.237 * | .019 | 1.000 | | |
| Global | .336 ** | .280 * | -.084 | 1.000 | |
| Pride | .518 *** | .305 ** | -.150 | .470 *** | 1.000 |

Note. n = 59; * p <.05, ** p < 01, *** p < .001.

Religious Group of Subject: HINDU
Religious Categorization of Actor: INGROUP
Criterion Variable: PRIDE

| | |
|---|---|
| Multiple R | .554 |
| R Square | .307 |
| Adjusted R Square | .254 |
| Standard Error | .762 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 13.65 | 3.41 |
| Residual | 53 | 30.80 | .58 |
| F = 5.870 | Sig. of F = .0005 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .354 | .100 | .442 | 12.468 | .000 |
| Stability | .044 | .076 | .074 | .331 | .568 |
| Controllability | -.084 | .069 | -.157 | 1.472 | .230 |
| Globality | .072 | .108 | .083 | .440 | .510 |
| (Constant) | 3.619 | .803 | | 20.300 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Pride. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .099 | 1.000 | | | |
| Control | -.201 | -.419 ** | 1.000 | | |
| Global | .354 ** | .233 * | -.031 | 1.000 | |
| Pride | .511 *** | .204 | -.280 * | .263 * | 1.000 |

Note. n = 58; * p <.05, ** p < 01, p < .001.

Religious Group of Subject: MUSLIM
Religious Categorization of Actor: OUTGROUP
Criterion Variable: PRIDE

| | |
|---|---|
| Multiple R | .163 |
| R Square | .026 |
| Adjusted R Square | -.045 |
| Standard Error | .814 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | .97 | .24 |
| Residual | 54 | 35.77 | .66 |
| F = .367 | Sig. of F = .830 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.067 | .145 | -.078 | .215 | .645 |
| Stability | .111 | .128 | .127 | .744 | .392 |
| Controllability | .029 | .101 | .039 | .082 | .776 |
| Globality | -.059 | .098 | -.104 | .368 | .547 |
| (Constant) | 4.174 | .766 | | 29.643 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Pride. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .285 * | 1.000 | | | |
| Control | .105 | -.164 | 1.000 | | |
| Global | .590 *** | .375 ** | .010 | 1.000 | |
| Pride | -.099 | .060 | .009 | -.102 | 1.000 |

Note. n = 59; * p <.05, ** p < .01, *** p <.001.

Religious Group of Subject: HINDU
Religious Categorization of Actor: OUTGROUP
Criterion Variable: PRIDE

Multiple R .334
R Square .112
Adjusted R Square .044
Standard Error .887

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 5.16 | 1.29 |
| Residual | 52 | 40.98 | .79 |

F = 1.638 Sig. of F = .179

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.286 | .154 | -.251 | 3.443 | .069 |
| Stability | -.032 | .072 | -.062 | .198 | .658 |
| Controllability | -.151 | .088 | -.237 | 2.991 | .897 |
| Globality | .115 | .099 | .162 | 1.340 | .252 |
| (Constant) | 6.055 | .973 | | 38.712 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Pride. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.038 | 1.000 | | | |
| Control | .019 | -.267 * | 1.000 | | |
| Global | .246 * | .215 | .086 | 1.000 | |
| Pride | -.214 | .045 | -.211 | .067 * | 1.000 |

Note. n = 58; * p <.05.

REGRESSION ANALYSIS.

NEGATIVE OUTCOME CONDITION:

Religious Group of Subject: MUSLIM
Religious Categorization of Actor: INGROUP
Criterion Variable: DISAPPOINTMENT

| | |
|---|---|
| Multiple R | .544 |
| R Square | .295 |
| Adjusted R Square | .243 |
| Standard Error | .885 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 17.73 | 4.43 |
| Residual | 54 | 42.29 | .78 |

F = 5.66 Sig. of F = .000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .294 | .125 | .299 | 5.48 | .023 |
| Stability | .119 | .117 | .120 | 1.04 | .313 |
| Controllability | .008 | .121 | .008 | .00 | .949 |
| Globality | .252 | .090 | .332 | 7.78 | .007 |
| (Constant) | 2.251 | .700 | | 10.32 | .002 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Disapp. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .218 * | 1.000 | | | |
| Control | .375 ** | .045 | 1.000 | | |
| Global | .235 * | .191 | .159 | 1.000 | |
| Disapp. | .407 *** | .250 * | .179 | .427 | 1.000 |

Note. n = 59; * p <.05, ** p <.01, *** p <.001.

Religious Group of Subject: HINDU
Religious Categorization of Actor: INGROUP
Criterion Variable: DISAPPOINTMENT

| | |
|---|---|
| Multiple R | .306 |
| R Square | .094 |
| Adjusted R Square | .025 |
| Standard Error | 1.435 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 11.34 | 2.83 |
| Residual | 53 | 109.28 | 2.06 |

F = 1.37 Sig. of F = .255

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .123 | .161 | .102 | .583 | .448 |
| Stability | -.024 | .168 | -.024 | .021 | .886 |
| Controllability | .004 | .153 | .005 | .001 | .987 |
| Globality | .306 | .142 | .299 | 4.640 | .035 |
| (Constant) | 2.562 | 1.404 | | 3.330 | .073 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Disapp. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.005 | 1.000 | | | |
| Control | .178 | -.591 *** | 1.000 | | |
| Global | -.025 | .339 ** | -.228 * | 1.000 | |
| Disapp. | .096 | -.074 | -.031 | .288 * | 1.000 |

Note. n = 58; * p <.05, ** p <.01, *** p <.001.

Religious Group of Subject: MUSLIM
Religious Categorization of Actor: OUTGROUP
Criterion Variable: DISAPPOINTMENT

Multiple R .259
R Square .067
Adjusted R Square -.003
Standard Error .718

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 1.97 | .49 |
| Residual | 53 | 27.38 | .52 |

F = .954 Sig. of F = .440

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.130 | .125 | -.141 | 1.080 | .303 |
| Stability | -.110 | .116 | -.113 | .907 | .345 |
| Controllability | -.125 | .086 | -.201 | 2.092 | .153 |
| Globality | -.061 | .108 | -.076 | .324 | .571 |
| (Constant) | 8.011 | 1.205 | | 44.200 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Disapp. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .032 | 1.000 | | | |
| Control | -.111 | -.288 * | 1.000 | | |
| Global | .186 | -.020 | .002 | 1.000 | |
| Disapp. | -.137 | -.077 | -.148 | -.101 | 1.000 |

Note. n = 59; * p <.05.

Religious Group of Subject: HINDU
Religious Categorization of Actor: OUTGROUP
Criterion Variable: DISAPPOINTMENT

| | |
|---|---|
| Multiple R | .157 |
| R Square | .025 |
| Adjusted R Square | -.049 |
| Standard Error | .868 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 1.04 | .25 |
| Residual | 53 | 39.91 | .75 |

F = .337 Sig. of F = .852

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.065 | .102 | -.089 | .41 | .526 |
| Stability | -.001 | .078 | -.002 | .00 | .987 |
| Controllability | -.016 | .081 | -.030 | .04 | .837 |
| Globality | -.075 | .083 | -.130 | .80 | .375 |
| (Constant) | 6.540 | .781 | | 70.11 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Disapp. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .197 | 1.000 | | | |
| Control | .025 | -.334 ** | 1.000 | | |
| Global | .047 | .284 * | -.317 ** | 1.000 | |
| Disapp. | -.096 | -.047 | .009 | -.126 | 1.000 |

Note. n = 58; * p <.05, ** p <.01, *** p <.001.

Religious Group of Subject: MUSLIM
Religious Categorization of Actor: INGROUP
Criterion Variable: ANGER

| | |
|---|---|
| Multiple R | .691 |
| R Square | .477 |
| Adjusted R Square | .438 |
| Standard Error | .828 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 33.81 | 8.45 |
| Residual | 54 | 37.03 | .68 |

F = 12.32 Sig. of F = .000

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .739 | .117 | .693 | 39.62 | .000 |
| Stability | .015 | .110 | .013 | .02 | .894 |
| Controllability | -.207 | .113 | -.195 | 3.35 | .072 |
| Globality | .113 | .084 | .138 | 1.81 | .185 |
| (Constant) | 2.657 | .656 | | 16.42 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Anger. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .218 * | 1.000 | | | |
| Control | .375 ** | .045 | 1.000 | | |
| Global | .235 | .191 | .159 | 1.000 | |
| Anger | .655 *** | .182 | .087 | .272 | 1.000 |

Note. n = 59; * p <.05, ** p <.01, *** p <.001.

Religious Group of Subject: HINDU
Religious Categorization of Actor: INGROUP
Criterion Variable: ANGER

| | |
|---|---|
| Multiple R | .301 |
| R Square | .091 |
| Adjusted R Square | .022 |
| Standard Error | 1.608 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 13.64 | 3.41 |
| Residual | 53 | 137.03 | 2.59 |
| F = 1.32 | Sig. of F = .275 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .287 | .181 | .213 | 2.52 | .119 |
| Stability | .157 | .187 | .142 | .70 | .406 |
| Controllability | 8.67E-04 | .172 | 8.38E-04 | .00 | .996 |
| Globality | .139 | .159 | .122 | .76 | .385 |
| (Constant) | 2.176 | 1.572 | | 1.91 | .172 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Anger. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.005 | 1.000 | | | |
| Control | .178 | -.591 *** | 1.000 | | |
| Global | -.025 | .339 ** | -.228 * | 1.000 | |
| Anger | .209 | .182 | -.073 | .165 | 1.000 |

Note. n = 58; * p <.05, ** p <.01, *** p <.001.

Religious Group of Subject: MUSLIM
Religious Categorization of Actor: OUTGROUP
Criterion Variable: ANGER

| | |
|---|---|
| Multiple R | .299 |
| R Square | .089 |
| Adjusted R Square | .020 |
| Standard Error | .798 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 3.31 | .83 |
| Residual | 53 | 33.80 | .64 |
| F = 1.30 | Sig. of F = .283 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.226 | .139 | -.218 | 2.64 | .110 |
| Stability | .057 | .129 | .060 | .20 | .658 |
| Controllability | -.106 | .096 | -.152 | 1.23 | .273 |
| Globality | .163 | .120 | .180 | 1.84 | .181 |
| (Constant) | 6.495 | 1.339 | | 23.53 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Anger. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .032 | 1.000 | | | |
| Control | -.111 | -.288 * | 1.000 | | |
| Global | .186 | -.028 | .002 | 1.000 | |
| Anger | -.166 | .094 | -.145 | .139 | 1.000 |

Note. n = 59; * p <05.

Religious Group of Subject: HINDU
Religious Categorization of Actor: OUTGROUP
Criterion Variable: ANGER

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .274 | Analysis of Variance: | | | |
| R Square | .075 | | | | |
| Adjusted R Square | .005 | | DF | SS | MS |
| Standard Error | .977 | Regression | 4 | 4.09 | 1.02 |
| | | Residual | 53 | 50.64 | .96 |

F = 1.07 Sig. of F = .379

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.014 | .115 | -.016 | .014 | .906 |
| Stability | -.149 | .088 | -.248 | 2.879 | .096 |
| Controllability | -.033 | .091 | -.053 | .133 | .717 |
| Globality | -.058 | .094 | -.088 | .384 | .538 |
| (Constant) | 6.906 | .880 | | 61.595 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Anger. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .197 | 1.000 | | | |
| Control | .025 | -.334 ** | 1.000 | | |
| Global | .047 | .284 * | -.317 ** | 1.000 | |
| Anger | -.070 | -.259 * | .058 | -.143 | 1.000 |

Note. n = 58; * p <.05, ** p <.01, *** p <.001.

STUDY 5.2

Analysis of Variance on Causal Dimensions:
Design: 4 (Categorization of Actor: double ingroup/in-outgroup/out-ingroup/double outgroup) x 2 (Outcome: positive/negative)

LOCUS OF CAUSALITY

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 8.88 | 4 | 2.22 | 1.89 | .115 |
| Actor | 4.70 | 3 | 1.57 | 1.34 | .265 |
| Outcome | 4.23 | 1 | 4.23 | 3.59 | .060 |
| 2-Way Interactions: | | | | | |
| Actor x Outcome | 123.50 | 3 | 41.17 | 35.03 | .000 |
| Explained | 132.39 | 7 | 18.91 | 16.09 | .000 |
| Residual | 180.96 | 154 | 1.17 | | |
| Total | 313.35 | 161 | 1.95 | | |

STABILITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | .73 | 4 | .18 | .12 | .977 |
| Actor | .73 | 3 | .24 | .15 | .928 |
| Outcome | .00 | 1 | .00 | .00 | .974 |
| 2-Way Interactions: | | | | | |
| Actor x Outcome | 242.87 | 3 | 80.96 | 50.51 | .000 |
| Explained | 243.60 | 7 | 34.80 | 21.71 | .000 |
| Residual | 246.80 | 154 | 1.60 | | |
| Total | 490.40 | 161 | 3.05 | | |

CONTROLLABILITY BY OTHERS.

| Source of Variation | Sum of Squares | DF | Mean Square | *F* | *Sig* of F |
|---|---|---|---|---|---|
| Main Effects: | 13.57 | 4 | 3.39 | 1.90 | .114 |
| Actor | 7.44 | 3 | 2.48 | 1.39 | .249 |
| Outcome | 6.03 | 1 | 6.03 | 3.37 | .068 |
| 2-Way Interactions: | | | | | |
| Actor x Outcome | 154.79 | 3 | 51.59 | 28.84 | .000 |
| Explained | 168.36 | 7 | 24.05 | 13.44 | .000 |
| Residual | 275.50 | 154 | 1.79 | | |
| Residual | 443.86 | 161 | 2.76 | | |

GLOBALITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 2.72 | 4 | .68 | .52 | .720 |
| Actor | 2.72 | 3 | .90 | .69 | .557 |
| Outcome | .00 | 1 | .00 | .00 | .964 |
| 2-Way Interactions: | | | | | |
| Actor x Outcome | 211.95 | 3 | 70.65 | 54.10 | .000 |
| Explained | 214.67 | 7 | 30.67 | 23.49 | .000 |
| Residual | 201.10 | 154 | 1.31 | | |
| Residual | 415.78 | 161 | 2.58 | | |

Additional Analysis:
Analysis of Variance on Causal Dimensions.

Design: 2 (Outcome: positive/negative) x
2 (Nationality: similar/different) x 2 (Religion: similar/different).

LOCUS OF CAUSALITY

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 4.88 | 3 | 1.63 | 1.38 | .249 |
| Outcome | 4.13 | 1 | 4.13 | 3.52 | .063 |
| Nationality | .01 | 1 | .01 | .01 | .945 |
| Religion | .70 | 1 | .70 | .60 | .440 |
| 2-Way Interactions: | 127.32 | 3 | 42.44 | 36.12 | .000 |
| Outcome x Nationality | 8.99 | 1 | 8.99 | 7.65 | .006 |
| Outcome x Religion | 114.33 | 1 | 114.33 | 97.30 | .000 |
| Nationality x Religion | 3.86 | 1 | 3.86 | 3.28 | .072 |
| 3-Way Interaction: | | | | | |
| Outcome x Nationality x Religion | .19 | 1 | .19 | .16 | .687 |
| Explained | 132.39 | 7 | 18.91 | 16.10 | .000 |
| Residual | 180.96 | 154 | 1.18 | | |
| Total | 313.35 | 161 | 1.95 | | |

STABILITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | .28 | 3 | .09 | .06 | .982 |
| Outcome | .00 | 1 | .00 | .00 | .979 |
| Nationality | .02 | 1 | .02 | .01 | .921 |
| Religion | .26 | 1 | .26 | .162 | .687 |

| | | | | | |
|---|---|---|---|---|---|
| 2-Way Interactions: | 242.62 | 3 | 80.87 | 50.46 | .000 |
| Outcome x Nationality | 22.59 | 1 | 22.59 | 14.09 | .000 |
| Outcome x Religion | 219.57 | 1 | 219.57 | 137.01 | .000 |
| Nationality x Religion | .38 | 1 | .38 | .24 | .627 |
| 3-Way Interaction: Outcome x Nationality x Religion | .71 | 1 | .71 | .44 | .508 |
| Explained | 243.60 | 7 | 34.80 | 21.71 | .000 |
| Residual | 246.80 | 154 | 1.60 | | |
| Total | 490.40 | 161 | 3.05 | | |

CONTROLLABILITY BY OTHERS.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 13.56 | 3 | 4.52 | 2.53 | .060 |
| Outcome | 6.03 | 1 | 6.03 | 3.37 | .068 |
| Nationality | 4.94 | 1 | 4.94 | 2.76 | .099 |
| Religion | 2.50 | 1 | 2.50 | 1.40 | .239 |
| 2-Way Interactions: | 152.98 | 3 | 50.99 | 28.51 | .000 |
| Outcome x Nationality | 14.16 | 1 | 14.16 | 7.91 | .006 |
| Outcome x Religion | 138.82 | 1 | 138.82 | 77.60 | .000 |
| Nationality x Religion | .02 | 1 | .02 | .01 | .920 |
| 3-Way Interaction: Outcome x Nationality x Religion | 1.81 | 1 | 1.81 | 1.01 | .316 |
| Explained | 168.357 | 7 | 24.05 | 13.44 | .000 |
| Residual | 275.50 | 154 | 1.79 | | |
| Total | 443.40 | 161 | 2.76 | | |

GLOBALITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| Main Effects: | 2.01 | 3 | .67 | .51 | .672 |
| Outcome | .00 | 1 | .00 | .00 | .957 |
| Nationality | .22 | 1 | .22 | .17 | .684 |
| Religion | 1.78 | 1 | 1.78 | 1.36 | .245 |
| 2-Way Interactions: | 212.64 | 3 | 70.88 | 54.28 | .000 |
| Outcome x Nationality | 7.72 | 1 | 7.72 | 5.91 | .016 |
| Outcome x Religion | 204.20 | 1 | 204.20 | 156.37 | .000 |
| Nationality x Religion | .78 | 1 | .78 | .59 | .442 |
| 3-Way Interaction: Outcome x Nationality x Religion | .03 | 1 | .03 | .03 | .873 |

| | | | | | |
|---|---|---|---|---|---|
| Explained | 214.68 | 7 | 30.67 | 23.49 | .000 |
| Residual | 201.10 | 154 | 1.31 | | |
| Total | 415.78 | 161 | 2.58 | | |

AFFECT - CAUSAL DIMENSION RELATIONS.

REGRESSION ANALYSIS.

POSITIVE OUTCOME CONDITION:

Religious Categorization of Actor: BANGALADESHI MUSLIM
Criterion Variable: HAPPINESS

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .831 | Analysis of Variance: | | | |
| R Square | .691 | | | | |
| Adjusted R Square | .609 | | DF | SS | MS |
| Standard Error | .425 | Regression | 4 | 6.08 | 1.52 |
| | | Residual | 15 | 2.71 | .18 |
| | | F = 8.411 | Sig. of F = .0009 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .553 | .255 | .406 | 4.714 | .046 |
| Stability | .157 | .126 | .248 | 1.554 | .231 |
| Controllability | -.054 | .097 | -.102 | .305 | .588 |
| Globality | .247 | .155 | .352 | 2.549 | .131 |
| (Constant) | .370 | 1.487 | | .062 | .806 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Happy. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .301 | 1.000 | | | |
| Control | -.050 | -.466 * | 1.000 | | |
| Global | .621 ** | .432 * | .160 | 1.000 | |
| Happiness | .705 *** | .571 ** | -.183 | .695 *** | 1.000 |

Note. n = 20; * p <.05, ** p < 01, *** p < .001.

Religious Categorization of Actor: BANGLADESHI HINDU
Criterion Variable: HAPPINESS

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .377 | Analysis of Variance: | | | |
| R Square | .142 | | | | |
| Adjusted R Square | -.085 | | DF | SS | MS |
| Standard Error | .834 | Regression | 4 | 1.74 | .43 |
| | | Residual | 15 | 10.45 | .69 |
| | | F = .624 | Sig. of F = .6519 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.096 | .269 | -.098 | .128 | .725 |
| Stability | .136 | .162 | .208 | .705 | .414 |
| Controllability | .185 | .173 | .283 | 1.144 | .301 |
| Globality | .250 | .252 | .258 | .988 | .336 |
| (Constant) | 2.958 | 1.929 | | 2.352 | .145 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Happy. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.118 | 1.000 | | | |
| Control | .376 | -.245 | 1.000 | | |
| Global | -.372 | -.065 | -.164 | 1.000 | |
| Happiness | -.112 | .134 | .153 | .235 | 1.000 |

Note. n = 20.

Religious Categorization of Actor: INDIAN MUSLIM
Criterion Variable: HAPPINESS

Multiple R .827
R Square .684
Adjusted R Square .605
Standard Error .512

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 9.11 | 2.27 |
| Residual | 16 | 4.19 | .26 |

F = 8.679 Sig. of F = .0006

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .452 | .138 | .531 | 10.717 | .004 |
| Stability | -.065 | .089 | -.122 | .524 | .479 |
| Controllability | -.107 | .086 | -.202 | 1.532 | .233 |
| Globality | .386 | .140 | .454 | 7.589 | .014 |
| (Constant) | 1.414 | .916 | | 2.384 | .142 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Happy. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .244 | 1.000 | | | |
| Control | .072 | -.457 * | 1.000 | | |
| Global | .436 * | .359 | -.213 | 1.000 | |
| Happiness | .685 *** | .263 | -.205 | .685 *** | 1.000 |

Note. n = 21; * p <.05, *** p <.001.

Religious Categorization of Actor: INDIAN HINDU
Criterion Variable: HAPPINESS

| | | | | | | |
|---|---|---|---|---|---|---|
| Multiple R | .415 | Analysis of Variance: | | | | |
| R Square | .174 | | | | | |
| Adjusted R Square | -.048 | | DF | SS | MS | |
| Standard Error | .820 | Regression | 4 | 2.10 | .52 | |
| | | Residual | 15 | 10.09 | .67 | |
| | | F = .781 | Sig. of F = .5545 | | | |
| Predictor Variables | B | SE B | Beta | F | Sig F | |
| Locus of Causality | -.255 | .166 | -.377 | 2.350 | .146 | |
| Stability | -.103 | .214 | -.133 | .234 | .635 | |
| Controllability | -.046 | .193 | -.069 | .059 | .811 | |
| Globality | -.072 | .159 | -.106 | .205 | .656 | |
| (Constant) | 6.605 | 1.769 | | 13.940 | .002 | |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Happy. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .165 | 1.000 | | | |
| Control | -.299 | -.525 ** | 1.000 | | |
| Global | .042 | .055 | -.025 | 1.000 | |
| Happiness | -.383 * | -.165 | .117 | -.118 | 1.000 |

Note. n = 58; * p <.05., ** p <.01.

Religious Categorization of Actor: BANGLADESHI HINDU
Criterion Variable: PRIDE

| | | | | | | |
|---|---|---|---|---|---|---|
| Multiple R | .811 | Analysis of Variance: | | | | |
| R Square | .659 | | | | | |
| Adjusted R Square | .568 | | DF | SS | MS | |
| Standard Error | .520 | Regression | 4 | 7.86 | 1.96 | |
| | | Residual | 15 | 4.06 | .27 | |
| | | F = 7.249 | Sig. of F = .0019 | | | |
| Predictor Variables | B | SE B | Beta | F | Sig F | |
| Locus of Causality | .818 | .312 | .515 | 6.862 | .019 | |
| Stability | .240 | .154 | .326 | 2.421 | .140 | |
| Controllability | .080 | .119 | .131 | .457 | .509 | |
| Globality | .153 | .189 | .186 | .650 | .432 | |
| (Constant) | -1.988 | 1.822 | | 1.190 | .292 | |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Pride. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .301 | 1.000 | | | |
| Control | -.050 | -.466 * | 1.000 | | |
| Global | .621 ** | .432 * | .160 | 1.000 | |
| Pride | .723 *** | .501 * | -.016 | .669 ** | 1.000 |

Note. n = 20; * p <.05, ** p < 01, *** p < .001.

Religious Categorization of Actor: BANGLADESHI HINDU
Criterion Variable: PRIDE

| | |
|---|---|
| Multiple R | .371 |
| R Square | .138 |
| Adjusted R Square | -.091 |
| Standard Error | .888 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 1.89 | .47 |
| Residual | 15 | 11.83 | .78 |

F = .601 Sig. of F = .6674

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.374 | .286 | -.360 | 1.709 | .210 |
| Stability | -.856 | .173 | -.123 | .245 | .628 |
| Controllability | .169 | .184 | .243 | .844 | .372 |
| Globality | -.025 | .268 | -.025 | .009 | .924 |
| (Constant) | 5.803 | 2.052 | | 7.994 | .012 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Pride. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.118 | 1.000 | | | |
| Control | .376 | -.245 | 1.000 | | |
| Global | -.372 | -.065 | -.164 | 1.000 | |
| Pride | -.245 | -.139 | .143 | .077 | 1.000 |

Note. n = 20.

Religious Categorization of Actor: INDIAN MUSLIM
Criterion Variable: PRIDE

| | |
|---|---|
| Multiple R | .423 |
| R Square | .179 |
| Adjusted R Square | -.025 |
| Standard Error | .849 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 2.52 | .63 |
| Residual | 16 | 11.54 | .72 |

F = .876 Sig. of F = .499

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.350 | .229 | -.400 | 2.340 | .145 |
| Stability | -.045 | .148 | -.050 | .087 | .772 |
| Controllability | -.091 | .143 | -.167 | .402 | .534 |
| Globality | .152 | .232 | .174 | .430 | .521 |
| (Constant) | 7.017 | 1.518 | | 21.345 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Pride. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .244 | 1.000 | | | |
| Control | .072 | -.457 * | 1.000 | | |
| Global | .436 * | .359 | -.213 | 1.000 | |
| Pride | -.356 | -.039 | -.197 | .007 | 1.000 |

Note. n = 21; * p <.05.

Religious Categorization of Actor: INDIAN HINDU
Criterion Variable: PRIDE

| | |
|---|---|
| Multiple R | .442 |
| R Square | .200 |
| Adjusted R Square | -.012 |
| Standard Error | .908 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 3.11 | .77 |
| Residual | 15 | 12.38 | .82 |

F = .942 Sig. of F = .466

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.102 | .184 | -.134 | .310 | .586 |
| Stability | -.047 | .237 | -.054 | .040 | .844 |
| Controllability | .245 | .214 | .321 | 1.316 | .269 |
| Globality | -.119 | .177 | -.156 | .457 | .509 |
| (Constant) | 4.521 | 1.959 | | 5.323 | .035 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Pride. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .165 | 1.000 | | | |
| Control | -.299 | -.525 ** | 1.000 | | |
| Global | .042 | .055 | -.025 | 1.000 | |
| Pride | -.246 | -.254 | .394 * | -.173 | 1.000 |

Note. n = 20; * p <.05, p <.01.

REGRESSION ANALYSIS

NEGATIVE OUTCOME CONDITION:

Religious Categorization of Actor: BANGLADESHI MUSLIM
Criterion Variable: DISAPPOINTMENT

| | |
|---|---|
| Multiple R | .745 |
| R Square | .555 |
| Adjusted R Square | .436 |
| Standard Error | .635 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 7.57 | 1.89 |
| Residual | 15 | 6.06 | .40 |
| F = 4.680 | Sig. of F = .0119 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.151 | .146 | -.190 | 1.06 | .318 |
| Stability | .102 | .172 | .117 | .35 | .562 |
| Controllability | -.376 | .150 | -.471 | 6.24 | .024 |
| Globality | .327 | .125 | .461 | 6.78 | .019 |
| (Constant) | 5.597 | 1.285 | | 18.96 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Disapp. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.296 | 1.000 | | | |
| Control | .125 | -.409 * | 1.000 | | |
| Global | .176 | .102 | -.018 | 1.000 | |
| Disapp. | -.203 | .414 * | -.552 ** | .449 * | 1.000 |

Note. n = 20; * p <.05, ** p <.01.

Religious Categorization of Actor: BANGLADESHI HINDU
Criterion Variable: DISAPPOINTMENT

| | |
|---|---|
| Multiple R | .257 |
| R Square | .066 |
| Adjusted R Square | -.182 |
| Standard Error | 1.032 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 1.13 | .28 |
| Residual | 15 | 16.00 | 1.06 |
| F = .265 | Sig. of F = .895 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .200 | .289 | .274 | .479 | .499 |
| Stability | -.128 | .295 | -.191 | .188 | .670 |
| Controllability | .037 | .214 | .055 | .030 | .865 |
| Globality | -.247 | .252 | .273 | .964 | .341 |
| (Constant) | 6.099 | 2.078 | | 8.615 | .010 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Disapp. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .715 *** | 1.000 | | | |
| Control | -.361 | -.608 ** | 1.000 | | |
| Global | .358 | .115 | -.165 | 1.000 | |
| Disapp. | .060 | .008 | .006 | -.188 * | 1.000 |

Note. n = 20; * p <.05, ** p <.01, *** p <.001.

Religious Categorization of Actor: INDIAN MUSLIM
Criterion Variable: DISAPPOINTMENT

| | |
|---|---|
| Multiple R | .658 |
| R Square | .434 |
| Adjusted R Square | .283 |
| Standard Error | .889 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 9.09 | 2.27 |
| Residual | 15 | 11.85 | .79 |

F = 2.876 Sig. of F = .0595

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .272 | .180 | .316 | 2.268 | .152 |
| Stability | .510 | .171 | .662 | 8.857 | .009 |
| Controllability | .168 | .124 | .275 | 1.841 | .194 |
| Globality | -.100 | .153 | -.152 | .426 | .524 |
| (Constant) | 1.349 | 1.159 | | 1.355 | .262 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Disapp. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .016 | 1.000 | | | |
| Control | -.044 | -.273 | 1.000 | | |
| Global | .355 | .428 * | -.208 | 1.000 | |
| Disapp. | .261 | .527 ** | .113 | .186 | 1.000 |

Note. n = 20; * p <.05, ** p <.01.

Religious Categorization of Actor: INDIAN HINDU
Criterion Variable: DISAPPOINTMENT

| | |
|---|---|
| Multiple R | .614 |
| R Square | .377 |
| Adjusted R Square | .222 |
| Standard Error | .930 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 8.42 | 2.10 |
| Residual | 16 | 13.86 | .86 |

F = 2.429 Sig. of F = .090

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.199 | .247 | -.254 | .64 | .432 |
| Stability | -.381 | .179 | -.493 | 4.49 | .050 |
| Controllability | -.112 | .249 | -.120 | .20 | .657 |
| Globality | -.014 | .280 | -.016 | .00 | .959 |
| (Constant) | 8.833 | 1.938 | | 20.77 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Disapp. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .504 * | 1.000 | | | |
| Control | -.617 ** | -.390 * | 1.000 | | |
| Global | .747 *** | .485 * | -.637 ** | 1.000 | |
| Disapp. | -.442 * | -.583 ** | .240 | -.370 * | 1.000 |

Note. n = 21; * p <.05, ** p <.01, *** p <.001.

Religious Categorization of Actor: BANGLADESHI MUSLIM
Criterion Variable: ANGER

| | |
|---|---|
| Multiple R | .691 |
| R Square | .478 |
| Adjusted R Square | .338 |
| Standard Error | .664 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 6.07 | 1.51 |
| Residual | 15 | 6.62 | .44 |

F = 3.43 Sig. of F = .035

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .464 | .153 | .606 | 9.19 | .008 |
| Stability | .076 | .180 | .091 | .18 | .677 |
| Controllability | .090 | .157 | .117 | .33 | .574 |
| Globality | .163 | .131 | .238 | 1.54 | .232 |
| (Constant) | 2.163 | 1.343 | | 2.59 | .128 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Anger. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.296 | 1.000 | | | |
| Control | .125 | -.409 * | 1.000 | | |
| Global | .176 | .102 | -.018 | 1.000 | |
| Anger | .636 ** | -.112 | .152 | .353 | 1.000 |

Note. n = 20; * p <.05, ** p <.01.

Religious Categorization of Actor: BANGLADESHI HINDU
Criterion Variable: ANGER

| | | Analysis of Variance: | | | |
|---|---|---|---|---|---|
| Multiple R | .588 | | | | |
| R Square | .345 | | | | |
| Adjusted R Square | .171 | | DF | SS | MS |
| Standard Error | 1.073 | Regression | 4 | 9.14 | 2.28 |
| | | Residual | 15 | 17.29 | 1.15 |
| | | F = 1.981 | Sig. of F = .1491 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .518 | .300 | .572 | 2.97 | .105 |
| Stability | -.712 | .307 | -.856 | 5.38 | .034 |
| Controllability | -.162 | .223 | -.197 | .53 | .477 |
| Globality | -.493 | .262 | -.439 | 3.54 | .079 |
| (Constant) | 9.275 | 2.160 | | 18.43 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Anger. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .715 *** | 1.000 | | | |
| Control | -.361 | -.608 ** | 1.000 | | |
| Global | .358 | .115 | -.165 | 1.000 | |
| Anger | -.126 | -.378 * | .189 | -.300 | 1.000 |

Note. n = 20; * p <.05, ** p <.01, *** p <.001.

Religious Categorization of Actor: INDIAN MUSLIM
Criterion Variable: ANGER

| | | Analysis of Variance: | | | |
|---|---|---|---|---|---|
| Multiple R | .624 | | | | |
| R Square | .389 | | | | |
| Adjusted R Square | .226 | | DF | SS | MS |
| Standard Error | .861 | Regression | 4 | 7.10 | 1.77 |
| | | Residual | 15 | 11.13 | .74 |
| | | F = 2.39 | Sig. of F = .096 | | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .023 | .175 | .029 | .01 | .893 |
| Stability | .407 | .166 | .565 | 5.98 | .027 |
| Controllability | .257 | .120 | .450 | 4.56 | .049 |
| Globality | .010 | .148 | .016 | .00 | .947 |
| (Constant) | 2.073 | 1.123 | | 3.40 | .084 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Anger. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .016 | 1.000 | | | |
| Control | -.044 | -.273 | 1.000 | | |
| Global | .355 | .428 * | -.208 | 1.000 | |
| Anger | .025 | .450 * | .292 | .175 | 1.000 |

Note. n = 20; * p <.05.

Religious Categorization of Actor: INDIAN HINDU
Criterion Variable: ANGER

| | |
|---|---|
| Multiple R | .375 |
| R Square | .140 |
| Adjusted R Square | -.074 |
| Standard Error | .824 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 1.78 | .44 |
| Residual | 16 | 10.88 | .68 |

F = .655 Sig. of F = .631

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.258 | .219 | -.438 | 1.390 | .255 |
| Stability | -.104 | .159 | -.178 | .425 | .523 |
| Controllability | -.066 | .220 | -.094 | .090 | .767 |
| Globality | .145 | .248 | .218 | .341 | .567 |
| (Constant) | 6.771 | 1.717 | | 15.551 | .001 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | Anger. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .504 * | 1.000 | | | |
| Control | -.617 ** | -.390 * | 1.000 | | |
| Global | .747 *** | .485 * | -.637 ** | 1.000 | |
| Anger | -.307 | -.257 | .107 | -.135 | 1.000 |

Note. n = 21; * p <.05, ** p <.01, *** p <.001.

REGRESSION ANALYSIS ON SELF-ESTEEM.

POSITIVE OUTCOME CONDITION:

Religious Categorization of Actor: BANGALADESHI MUSLIM
Criterion Variable: SELF-ESTEEM

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .763 | Analysis of Variance: | | | |
| R Square | .583 | | | | |
| Adjusted R Square | .464 | | DF | SS | MS |
| Standard Error | .293 | Regression | 4 | 1.68 | .42 |
| | | Residual | 14 | 1.20 | .08 |
| | | F = 4.896 | | Sig. of F = .0111 | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .392 | .176 | .486 | 4.921 | .043 |
| Stability | .034 | .087 | .090 | .154 | .700 |
| Controllability | -.104 | .076 | -.297 | 1.840 | .196 |
| Globality | .118 | .108 | .292 | 1.206 | .290 |
| (Constant) | 3.023 | 1.026 | | 8.670 | .010 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | SE. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .246 | 1.000 | | | |
| Control | .090 | -.384 | 1.000 | | |
| Global | .610 ** | .411 * | .274 | 1.000 | |
| Self-esteem | .661 ** | .445 * | -.209 | .545 ** | 1.000 |

Note. n = 19; * p <.05, ** p < 01.

Religious Categorization of Actor: BANGLADESHI HINDU
Criterion Variable: SELF-ESTEEM

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .721 | Analysis of Variance: | | | |
| R Square | .519 | | | | |
| Adjusted R Square | .391 | | DF | SS | MS |
| Standard Error | .408 | Regression | 4 | 2.71 | .67 |
| | | Residual | 15 | 2.50 | .16 |
| | | F = 4.060 | | Sig. of F = .0200 | |

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.470 | .131 | -.734 | 12.732 | .002 |
| Stability | -.048 | .079 | -.112 | .363 | .555 |
| Controllability | .206 | .084 | .482 | 5.915 | .028 |
| Globality | -.247 | .123 | -.389 | 4.022 | .063 |
| (Constant) | 7.798 | .944 | | 68.179 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | SE. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.118 | 1.000 | | | |
| Control | .376 | -.245 | 1.000 | | |
| Global | -.372 | -.065 | -.164 | 1.000 | |
| Self-esteem | -.395 | -.118 | .297 | -.188 | 1.000 |

Note. n = 20.

Religious Categorization of Actor: INDIAN MUSLIM
Criterion Variable: SELF-ESTEEM

| | |
|---|---|
| Multiple R | .458 |
| R Square | .210 |
| Adjusted R Square | .012 |
| Standard Error | .605 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 1.56 | .39 |
| Residual | 16 | 5.86 | .36 |

F = 1.064 Sig. of F = .4059

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .012 | .163 | .019 | .006 | .939 |
| Stability | .025 | .106 | .064 | .058 | .813 |
| Controllability | -.153 | .102 | -.386 | 2.226 | .155 |
| Globality | .065 | .165 | .103 | .157 | .696 |
| (Constant) | 6.273 | 1.082 | | 33.553 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | SE. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .244 | 1.000 | | | |
| Control | .072 | -.457 * | 1.000 | | |
| Global | .436 * | .359 | -.213 | 1.000 | |
| Self-esteem | .053 | .283 | -.436 * | .217 | 1.000 |

Note. n = 21; * p <.05.

Religious Categorization of Actor: INDIAN HINDU
Criterion Variable: SELF-ESTEEM

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .526 | Analysis of Variance: | | | |
| R Square | .276 | | | | |
| Adjusted R Square | .084 | | DF | SS | MS |
| Standard Error | .586 | Regression | 4 | 1.97 | .49 |
| | | Residual | 15 | 5.16 | .34 |

F = 1.436 Sig. of F = .2704

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.173 | .119 | -.334 | 2.100 | .168 |
| Stability | -.019 | .153 | -.032 | .016 | .900 |
| Controllability | .137 | .138 | .265 | .988 | .336 |
| Globality | -.077 | .114 | -.147 | .453 | .512 |
| (Constant) | 6.119 | 1.266 | | 23.369 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | SE. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .165 | 1.000 | | | |
| Control | -.299 | -.525 ** | 1.000 | | |
| Global | .043 | .055 | -.025 | 1.000 | |
| Self-esteem | -.425 * | -.235 | -.386 * | -.170 | 1.000 |

Note. n = 21; * p <.05.

NEGATIVE OUTCOME CONDITION:

Religious Categorization of Actor: BANGLADESHI MUSLIM
Criterion Variable: SELF-ESTEEM

| | | | | | |
|---|---|---|---|---|---|
| Multiple R | .217 | Analysis of Variance: | | | |
| R Square | .047 | | | | |
| Adjusted R Square | -.206 | | DF | SS | MS |
| Standard Error | .669 | Regression | 4 | .33 | .08 |
| | | Residual | 15 | 6.72 | .44 |

F = .186 Sig. of F = .941

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.007 | .154 | -.012 | .00 | .964 |
| Stability | -.148 | .181 | -.237 | .66 | .426 |
| Controllability | -.050 | .158 | -.088 | .10 | .752 |
| Globality | .036 | .132 | .071 | .07 | .785 |
| (Constant) | 6.306 | 1.353 | | 21.71 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | SE. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | -.296 | 1.000 | | | |
| Control | .125 | -.409 * | 1.000 | | |
| Global | .176 | .102 | -.018 | 1.000 | |
| Self-esteem | .060 | -.190 | .006 | .047 | 1.000 |

Note. n = 20; * p <.05.

Religious Categorization of Actor: BANGLADESHI HINDU
Criterion Variable: SELF-ESTEEM

| | |
|---|---|
| Multiple R | .542 |
| R Square | .293 |
| Adjusted R Square | .105 |
| Standard Error | .392 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | .96 | .24 |
| Residual | 15 | 2.31 | .15 |

F = 1.56 Sig. of F = .2355

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | .074 | .110 | .232 | .45 | .511 |
| Stability | .136 | .112 | .467 | 1.48 | .241 |
| Controllability | .077 | .081 | .266 | .89 | .358 |
| Globality | -.034 | .095 | -.088 | .13 | .721 |
| (Constant) | 5.062 | .790 | | 40.99 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | SE. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .715 *** | 1.000 | | | |
| Control | -.361 | -.608 ** | 1.000 | | |
| Global | .358 | .115 | -.165 | 1.000 | |
| Self-esteem | | .439 | .462 * | -.087 | .005 1.00 |
| 0 | | | | | |

Note. n = 20; * p <.05, ** p <.01, *** p <.001.

Religious Categorization of Actor: INDIAN MUSLIM
Criterion Variable: SELF-ESTEEM

| | |
|---|---|
| Multiple R | .546 |
| R Square | .298 |
| Adjusted R Square | .082 |
| Standard Error | 1.403 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 10.88 | 2.72 |
| Residual | 13 | 25.61 | 1.97 |

F = 1.38 Sig. of F = .293

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.551 | .293 | -.471 | 3.51 | .083 |
| Stability | .229 | .271 | .222 | .71 | .411 |
| Controllability | .026 | .205 | .030 | .01 | .899 |
| Globality | .250 | .247 | .278 | 1.02 | .329 |
| (Constant) | 5.937 | 1.836 | | 10.45 | .006 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | SE. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .013 | 1.000 | | | |
| Control | .000 | -.237 | 1.000 | | |
| Global | .356 | .402 * | -.132 | 1.000 | |
| Self-esteem | -.369 | .321 | -.059 | .196 | 1.000 |

Note. n = 18; * p <.05.

Religious Categorization of Actor: INDIAN HINDU
Criterion Variable: SELF-ESTEEM

| | |
|---|---|
| Multiple R | .695 |
| R Square | .484 |
| Adjusted R Square | .355 |
| Standard Error | .456 |

Analysis of Variance:

| | DF | SS | MS |
|---|---|---|---|
| Regression | 4 | 3.12 | .78 |
| Residual | 16 | 3.33 | .20 |

F = 3.754 Sig. of F = .024

| Predictor Variables | B | SE B | Beta | F | Sig F |
|---|---|---|---|---|---|
| Locus of Causality | -.063 | .121 | -.150 | .274 | .608 |
| Stability | .100 | .088 | .240 | 1.287 | .273 |
| Controllability | -.022 | .122 | -.044 | .033 | .858 |
| Globality | .298 | .137 | .630 | 4.709 | .045 |
| (Constant) | 4.170 | .950 | | 19.263 | .000 |

Correlation Matrix.

| | Locus. | Stable. | Control. | Global. | SE. |
|---|---|---|---|---|---|
| Locus | 1.000 | | | | |
| Stable | .504 * | 1.000 | | | |
| Control | -.617 ** | -.390 * | 1.000 | | |
| Global | .747 *** | .485 * | -.637 ** | 1.000 | |
| Self-esteem | .469 | .488 | -.446 | .663 ** | 1.000 |

Note. n = 21; * p <.05, ** p <.01, *** p <.001.

STUDY 5.3

Analysis of Variance on Intergroup Evaluations:
Design: 2 (Order: one/two) x 2 (Target: ingroup/outgroup)

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 21.41 | 61 | .35 | | |
| Order | .61 | 1 | .61 | 1.73 | .193 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 35.14 | 61 | .58 | | |
| Target | 116.83 | 1 | 116.83 | 202.80 | .000 |
| Order X Target | 2.04 | 1 | 2.04 | 3.54 | .065 |

Analysis of Variance on Causal Dimensions:
Design: 2 (Actor: ingroup/outgroup) x 2 (Outcome: positive/negative) x 2 (Order: one/two)

LOCUS OF CAUSALITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 182.10 | 63 | 2.89 | | |
| Order | .06 | 1 | .06 | .02 | .889 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 39.49 | 63 | .63 | | |
| Actor | .38 | 1 | .38 | .61 | .437 |
| Order X Actor | .00 | 1 | .00 | .00 | .947 |
| Within Cells | 172.95 | 63 | 2.75 | | |
| Outcome | 61.93 | 1 | 61.93 | 22.56 | .000 |
| Order X Outcome | .14 | 1 | .14 | .05 | .822 |
| Within Cells | 38.03 | 63 | .60 | | |
| Actor X Outcome | 40.50 | 1 | 40.50 | 67.09 | .000 |
| Order X Actor X Outcome | 6.33 | 1 | 6.33 | 10.49 | .002 |

STABILITY.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 169.17 | 63 | 2.69 | | |
| Order | 8.58 | 1 | 8.58 | 3.19 | .079 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 70.56 | 63 | 1.12 | | |
| Actor | .30 | 1 | .30 | .27 | .606 |
| Order X Actor | .37 | 1 | .37 | .33 | .565 |

| | | | | | |
|---|---|---|---|---|---|
| Within Cells | 151.23 | 63 | 2.40 | | |
| Outcome | 76.92 | 1 | 76.92 | 32.04 | .000 |
| Order X Outcome | 3.05 | 1 | 3.05 | 1.27 | .264 |
| Within Cells | 68.50 | 63 | 1.09 | | |
| Actor X Outcome | 28.04 | 1 | 28.04 | 25.79 | .000 |
| Order X Actor X Outcome | 2.46 | 1 | 2.46 | 2.27 | .137 |

<u>CONTROLLABILITY BY OTHERS.</u>

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 193.78 | 63 | 3.08 | | |
| Order | 5.41 | 1 | 5.41 | 1.76 | .190 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 62.09 | 63 | .99 | | |
| Actor | 1.77 | 1 | 1.77 | 1.79 | .185 |
| Order X Actor | .07 | 1 | .07 | .07 | .795 |
| Within Cells | 115.13 | 63 | 1.83 | | |
| Outcome | .28 | 1 | .28 | .15 | .697 |
| Order X Outcome | .03 | 1 | .03 | .01 | .904 |
| Within Cells | 63.72 | 63 | 1.01 | | |
| Actor X Outcome | 6.52 | 1 | 6.52 | 6.44 | .014 |
| Order X Actor X Outcome | 7.15 | 1 | 7.15 | 7.07 | .010 |

<u>GLOBALITY</u>.

| Source of Variation | Sum of Squares | DF | Mean Square | F | Sig of F |
|---|---|---|---|---|---|
| *Between-Subjects Effect* | | | | | |
| Within Cells | 172.02 | 63 | 2.73 | | |
| Order | 4.53 | 1 | 4.53 | 1.66 | .202 |
| *Within-Subjects Effects* | | | | | |
| Within Cells | 59.30 | 63 | .94 | | |
| Actor | .20 | 1 | .20 | .22 | .643 |
| Order X Actor | 1.26 | 1 | 1.26 | 1.34 | .251 |
| Within Cells | 105.37 | 63 | 1.67 | | |
| Outcome | 52.75 | 1 | 52.75 | 31.54 | .000 |
| Order X Outcome | .23 | 1 | .23 | .14 | .710 |
| Within Cells | 53.41 | 63 | .85 | | |
| Actor X Outcome | 26.98 | 1 | 26.98 | 31.82 | .000 |
| Order X Actor X Outcome | 9.34 | 1 | 9.34 | 11.02 | .002 |